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## THE MORE IMPORTANT RECORDS FOR JULY

Grasshoppers were appearing in large numbers in the Panhandle of Texas and Oklahoma and in southwestern Kansas. General flight in a northwesterly direction over Kansas and into southwestern Nebraska was reported. Heavy populations were also reported from northwestern Wyoming and north-central Utah, and minor flights were reported from north-central Montana.

Mormon crickets were migrating in east-central North Dakota and south-central South Dakota. Populations were smaller in east-central Colorado and south-central Montana. In Montana control operations were completed during the third week in July. Heavy deposits of eggs were observed about the middle of the month in the Big Horn Mountains of Wyoming. Large numbers of crickets are migrating from the higher altitudes toward crop land in eastern Idaho and rather heavy populations are still present in southern Washington.

Rather heavy cutworm damage was reported during the month from the South Atlantic States, including Alabama. Scattered reports of damage were received from the Great Lakes region and from the Pacific Northwest.

Limited outbreaks of the armyworm were reported from the Great Plains, also an isolated outbreak in the District of Columbia.

Fall armyworm was reported from many localities along the Atlantic seaboard and Gulf Coast States.

The beet webworm was very prevalent in the Great Plains States and was doing serious damage in North Dakota and South Dakota, and was also reported as present in destructive numbers in Utah.

Rose chafer was appearing in destructive abundance from New England westward across New York and the East Central States into Minnesota and Iowa.

Damage to corn by the grape colaspis was generally prevalent in the East Central States and southward to the Gulf and into Texas.

Outbreaks of Say's stinkbug were reported from North Dakota, South Dakota, Oklahoma, and Utah.

The hessian fly survey in Ohio indicates a decided decrease in the infestation over that of last year, being the lowest since 1918.

Chinch bug infestations were generally spotted over the East Central States, heavy infestations having occurred in Missouri, Iowa, Nebraska, and southward to Oklahoma.

The corn silk beetle was unusually abundant in the Gulf States.

Codling moth damage in eastern New York was more extensive during the last week in July than at the same time last year. Considerable damage to pears was reported from eastern New York. In general, the insect was less troublesome than usual in the Middle Atlantic States while in the East Central States damage was decidedly more serious.

Rosy apple aphid and green apple aphid infestations were heavy in New England and New York, southward to Delaware, and westward to Ohio and Indiana.

European red mite developed into outbreak proportions toward the end of the month in New England and New York.

Grape leafhopper was generally abundant from North Dakota to Kansas, and also in Utah.

California red scale was more numerous generally than it was a year ago. Severe infestations of black scale are reported from the interior parts of southern California.

Blister beetles were generally prevalent and troublesome along the Atlantic seaboard and around the Gulf, also in the Lake States from Michigan to Minnesota and in the Great Plains, Utah, and the Pacific Northwest.

Potato flea beetles were damaging potatoes in Michigan, North Dakota, and South Dakota, and a severe outbreak occurred in Wahkiakum County, Wash.

Heavy damage to peas by the pea aphid was reported from Utah and Washington.

The cabbage shoot weevil (Coutorhynchus assimilis Payk.) was seriously damaging cabbage seed in the seed-producing area of western Washington.

Squash bug was occurring in destructive numbers in widely scattered areas throughout the country from New York to Mississippi and westward to Texas and Utah.

The corn ear worm, though appearing later than usual in many States, was seriously destructive from New York to the entire Gulf region and in Utah.

Heavy infestations of pepper weevil were reported from southern California.

Beet leafhopper was producing considerable curly top on sugar beets in parts of Utah and Nevada.

Cotton boll weevil, though generally below normal in numbers, was reported as increasing rapidly during the latter part of July in Florida, Georgia, Louisiana, and Texas.



Cotton flea hopper is injuriously abundant in northern Texas.

Cotton aphids were generally low in numbers early in the month but were building up rapidly in a number of States during the last week.

The fall webworm is unusually abundant in the eastern part of the country from New England southward to Florida and westward to Mississippi.

The elm leaf beetle is very abundant in New England and has been reported locally as far south as Virginia and westward to Ohio. Also reported from Utah.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

General. C. Wakeland (June 28): No populations of Dissosteira longipennis Thos. remain in Colorado and New Mexico to justify control. In Baca County, Colo. most Melanoplus mexicanus Sauss. are adults. Light populations have reached grainfields of northern Baca County and eastern Kansas. M. mexicanus populations in northern and northeastern Colorado are light, except in alfalfa where baiting by farmers has been lacking. Same situation in Wyoming. Crop damage heavy in western Nebraska, owing to lack of control by farmers. Crop losses not over 5 percent in Montana. Situation at Kittson, Marshall, and Polk Counties, Minn., well in hand. M. mexicanus late in northeastern North Dakota but beginning in Pembina County. Populations of M. bivittatus Say extremely heavy in east-central and southern counties of South Dakota.

Colorado. B. M. Gaddis and assistants (July 14-20):<sup>1/</sup> Survey of El Paso, Otero, Pueblo, Las Animas, and Lincoln Counties revealed few D. longipennis. Less than 1 per square yard found over an area of 20 sections in these counties. From 75 to 95 percent of M. bivittatus, M. mexicanus, and Aeoloplus turnbullii Thos. are in the adult stage.

California. (July 14-20): Second-generation M. mexicanus now present in Imperial County averaging 25 per square yard in many fields. Populations are 5 percent first instar, 10 percent second, and 80 percent third instar. About 2 percent of the first-generation adults remain. M. devastator Scudd. is 98-percent adult in San Diego County.

Nevada. (July 14-20): Oviposition at peak throughout the State, with that of M. occidentalis Thos. practically completed.

Texas. (July 14-20): Heavy concentrations of M. differentialis Thos. reported along field margins, especially small-grain fields, in Potter and Oldham Counties, numbering as high as 25 per square yard along margins of some fields. Concentrations of M. mexicanus in these counties were not over 3 per square yard in fields, or 10 per square yard in margins. M. packardii Scudd. and M. differentialis are dominant in Dallam and Hartley Counties and A. turnbullii is dominant in Hansford County. Native crop-hopper populations range from 20 to 25 per square yard.

F. L. Thomas (July 9): Damaged cotton along creeks and the east fork of the Trinity River.

Oklahoma. (July 7-13): Dominant species in Texas and Cimarron Counties are A. turnbullii, M. mexicanus, and M. packardii. Very little control work being done.

F. E. Whitehead (July 24): Outbreaks in the entire Panhandle have been much more severe than anticipated.

Kansas. (July 7-13): A. turnbullii remains the dominant species throughout the western part of the State. Certain local infestations show as high as 80

<sup>1/</sup> Where no name is given after the State the report is by B. M. Gaddis and assistants.



percent M. mexicanus but such areas are small. M. bivittatus appears to be dominant in alfalfa fields. Aulocara ellioti Thos. and A. turnbullii are plentiful in pastures. Considerable crop damage has developed within the last 10 days. Heavy damage to wheat and barley was reported in the southwestern counties of the State, averaging 20-percent damage to barley and 6-percent to wheat. As high as 50-percent damage reported in a few fields. Grasshoppers are moving into corn in areas where most of the wheat has been cut. Corn in isolated areas, especially in river valleys, is being damaged severely. Marginal damage of 100 percent has occurred in some fields of high acreage and some smaller fields have been completely destroyed. M. differentialis and M. bivittatus are causing most damage to corn. General flights of M. mexicanus were reported to have occurred in a northeasterly direction over northwestern Kansas on July 8, 9, and 10. (July 14-20): From 5- to 10-percent damage to wheat and from 15- to 20-percent damage to barley is reported in Stanton and Morton Counties.

Nebraska. (July 14-20): Heavy flight moving southwestward reported on July 12 in Howard County, southeastern Nebraska. M. differentialis can now be found generally throughout central Nebraska and may soon become the dominant species in this area. Adults of economic importance continue to remain along roadsides, fence rows, and idle lands. Some migration into corn-fields is occurring and marginal damage in a few areas is reported as severe. Populations are increasing and adult spread is progressing rapidly in the southwestern part of the State. High marginal concentrations of A. turnbullii are still present in certain areas. Ninety-five percent of A. turnbullii, 98 percent of M. mexicanus, 100 percent of M. confusus Scudd., 95 percent of M. bivittatus, and 50 percent of M. differentialis are in the adult stage. Fungus reported causing hopper mortality of less than 3 percent in a tableland area located between the North and South Platte Rivers, northwest of Ogallala, in Keith County.

Missouri. (July 7-13): M. differentialis is the dominant species throughout the southeastern counties of Scott, Stoddard, Pemiscot, Dunklin, and New Madrid. M. mexicanus reported ovipositing.

L. Haseman (July 23): Conditions normal except for a few south-central and southeastern counties where second-brood M. mexicanus have been attracting some attention. The two-striped species is most common in the central part of the State and was mating and preparing to oviposit on July 22.

Iowa. (July 14-20): M. bivittatus are all adult throughout the State and 75 percent of the M. differentialis are in the last two instars. M. mexicanus all adult and oviposition is in progress. Fungus reported throughout the State and in some areas has reduced hopper populations about 30 percent. Beefly larvae are also reported as infesting hoppers.

Wyoming. (July 14-20): Approximately 75-percent adult in the irrigated area in Park, Sheridan, Big Horn, Washakie, and Fremont Counties, with oviposition beginning. M. formic-rubrum Deg. is still hatching and the percentage is high, particularly in Park and Big Horn Counties. High percentage of adults present in Goshen and Laramie Counties and oviposition is progressing rapidly.

Utah. G. F. Knowlton (July 26): Outbreak severe in many localities. Most extensive control work particularly in Utah County. Most of the hoppers are now winged, except in late-hatching localities. Mating of M. bivittatus and M. packardii has been observed during the last 2 weeks.

Montana. (July 14-20): Flights reported at Turner, Treelon, Rudyard, 38 miles northwest of Havre, and 27 miles northwest of Rudyard.

South Dakota. (July 14-20): Harvesting of small grains is causing considerable movement of hopper populations throughout the State. Populations are shifting to cornfields, and marginal damage in localized areas is increasing rapidly. Severe damage to barley and oats reported in a number of counties.

H. C. Severin (July 26): Leaving cut-over grainfields and attacking sorghum, corn, and late-planted cane, resulting in much damage. Some local flights have already occurred.

North Dakota. (July 14-20): Approximately all M. bivittatus and 80 percent of the M. mexicanus in northwestern North Dakota are in the adult stage. On July 16 a local flight of M. mexicanus was reported northward in Steele County. Local flights reported in Traill and Grand Forks Counties during the week. Reported moving into flaxfields in Pembina and Griggs Counties, where they were causing light damage. Considerable damage to barley in Pembina County reported.

J. A. Munro (July 21): Emergence less than 20 percent that expected in a field under observation at Langdon, based on egg surveys made in the fall of 1939 and again in the spring of 1940. Cause of curtailed hatch not definitely apparent. M. mexicanus was the predominating species.

Minnesota. (July 14-20): From 20 to 85 percent of M. bivittatus, the dominant species in the northwestern counties of Norman, Mahanomen, Lake of the Woods, Beltrami, Koochiching, and Roseau, are now adult.

Wisconsin. (June 30-July 6): Infestations are localized and spotted and far less serious than was anticipated. M. bivittatus appears to be the dominant species at present. Weather conditions have greatly delayed development of hatch and crop injury has been light.

E. L. Chambers (July 30): Serious injury to new seeding and second-crop alfalfa and clover just beginning to be reported from areas where heaviest infestations were forecast by last fall's egg survey. Control measures are being used. M. bivittatus, which was not recorded as an important species until this year, seems to be dominant in the northern two-thirds of the State. M. femur-rubrum is about equally abundant in the southern part of the State.

Michigan. (July 14-20): M. mexicanus constitutes about 75 percent of the population in the northeastern and north-central counties. M. femur-rubrum, Cannula pellucida Scudd., and Agoneotettix decorum Scudd. compose the remaining 25 percent. Hatch of all species is practically complete. M. femur-rubrum is largely second, third, and fourth instar, while about 30 percent of the other species mentioned are adult. Damage reported to oats, alfalfa, clover, beans, raspberries, corn, apple trees, and melons.



Arkansas. D. Isely (July 23): Causing local damage, particularly in north-eastern counties. Differential grasshopper is the species chiefly involved.

Mississippi. C. Lyle (July 25): Nymphs, thought to be M. differentialis, were taken, and M. femur-rubrum was causing injury in Leflore County the latter part of June. Grasshoppers reported as more numerous and generally distributed in northwestern Mississippi than for several years.

MORMON CRICKET (Anabrus simplex Hald.)

North Dakota. J. A. Munro (July 22): Observed crossing highway in the vicinity of Lakota. Reported more numerous farther south in the county.

South Dakota. (July 7-13): Reported in Stanley, Lyman, Mellette, Todd, and Jones Counties. (July 14-20): All cricket bands in Jones County greatly reduced and remaining crickets are now scattered throughout the eastern two-thirds of the county.

Nebraska. (July 7-13): Rather numerous in a few areas of Banner and Scotts Bluff Counties.

Colorado (July 7-13): Less than 2 per square yard were reported in northern Lincoln and western Kit Carson Counties. Marginal infestation of 75 per square yard reported on a farm north and west of Flagler, in Kit Carson County. Less than 1 cricket per square yard present in the field.

Montana. (July 14-20): Large numbers still present in the Wolf Mountains of Big Horn County. No longer practical to continue control operations, as the crickets are so far removed from crop areas.

Wyoming. (July 7-13): Crickets in all areas observed are now in adult stage; oviposition nearly completed in some areas of Hot Springs County; heavy deposits of unhatched eggs present over a large area in the Big Horn Mountains, Sheridan County. No embryonic development appears to have taken place and the number of eggs present apparently is as great now as at the time the egg survey was made in the fall of 1939. A few seventh-instar nymphs and adults noted in this area.

Nevada. (July 14-20): Oviposition is from 50- to 75-percent complete throughout many areas at the lower altitudes.

Idaho. (July 14-20): Large numbers in Clark County now migrating from higher altitudes toward crop areas in the vicinity of Kilgore and Medicine Lodge. Many crickets at higher altitudes are in the fourth instar. A heavy infestation, which covered approximately 12,000 acres in the lower altitudes of this county, has been practically cleaned of crickets. Large infestation in the Juniper-Butte vicinity of Fremont County has been materially reduced. Oviposition is about 50-percent completed in some areas, while in others it appears to have just begun.

Utah. (July 14-20): Most crickets throughout the State have completed oviposition.

G. F. Knowlton et al. (July 13): In Tooele, Juab, and Utah Counties approximately 75 percent of the eggs have been laid and most of the areas are lightly infested. (July 20): Band of fifth-instar nymphs located in the Cedar Breaks-Brian Head Peak area.

Washington. (June 30-July 6): Rather heavy populations still present adjacent to crop lands in the Pasco area of Franklin County. Oviposition was almost complete, migrations were not appearing, and, as harvesting had already started, crop damage is no longer likely to occur.

Oregon. (July 14-20): Oviposition practically complete in Gilman, Sherman, Wasco, and Jefferson Counties.

#### CUTWORMS (Noctuidae)

Delaware. L. A. Stearns (June 24): A loss of about 25 percent occurred in a planting of 25 acres of young corn at Port Penn, caused by the yellow-striped armyworm (Prodenia ornithogalli, Guen.). (Det. by C. Heinrich.)

Georgia. P. M. Gilmer (July 20): Feltia sp. reported from Sylvester, Worth County, as doing considerable damage on runner peanuts. Spanish type seems to have suffered much less damage. These are the first specimens submitted. A number of fields are almost ruined. Most of the reports have come from west or southwest of Tifton. (Det. by C. Heinrich.)

Florida. J. R. Watson (July 22): Semitropical armyworm (Prodenia eridania Cram. very common from Palatka to Bradenton, attacking corn at Gainesville, gladiolus at Palatka, and castor-beans in many localities.

C. S. Rude (July 27): Great deal of damage to cotton being done in some fields in Lake County. Larvae are migrating from tomato fields and from weeds. Also becoming increasingly numerous in Marion County and observed in a few fields in Alachua County.

Tennessee. H. Lamb (July 25): Larvae of Feltia sp. found in nursery soil near black locust seedlings that had presumably been fed upon and girdled by them. Collected at Clinton and Pikeville. (Det. by C. Heinrich.)

Alabama. J. M. Robinson (July 16): Climbing cutworms were attacking cotton squares at Auburn today.

Michigan. R. Hutson (July 24): Sugar beets at Menasha considerably damaged by Scotogramma trifolii Rott. (Det. by C. Heinrich.)

Wisconsin. E. L. Chambers (July 3): Considerable loss to truck crops reported in the vicinity of Winnebago and Brown Counties and in the southern part of the State.

Nebraska. C. Wakeland (July 2): Army cutworm, Chorizagrotis auxiliaris Grote, reported as very prevalent on alfalfa in Franklin County.



- Texas. R. K. Fletcher (July 22): Causing severe injury to garden in Travis County on July 6.
- Nevada. G. G. Schweis (June 29): Greasy cutworms (Agrotis ypsilon Rott.) reported as damaging sugar beets in the Lovelock area.
- Washington. L. G. Smith (July 17): Five acres of seed peas in Clallam County severely damaged by cutworms. Severe damage to corn in Pierce and Clark Counties. Serious outbreak occurring throughout the north end of Whidby Island, Island County, on July 13. (July 24): Doing extensive damage on July 15 to peppermint, corn, and root crops on Puget Island. Infestation in mint fields reported as being 6 weeks earlier than usual.
- Oregon. D. C. Mote and assistants (June 24): Fifty-percent loss by A. ypsilon reported on one 20-acre red-beet field at Eugene. (July 15): The variegated cutworm (Peridroma margaritosa Haw.) has been extremely numerous and damage has been severe in various places in the Willamette Valley. Field peas and clover have been most heavily damaged. Clover heads in some cases were so badly eaten that they were not harvested for seed. (Det. by L. P. Rockwood.)

ARMYWORM (Cirphis unipuncta Haw.)

- District of Columbia. W. R. Walton (July 23): Specimen found at two locations on one street in Washington.
- Wisconsin. (July 30): Serious but limited outbreaks observed in six counties where control requests have been received. Reported from a number of other counties.
- Nebraska. H. D. Tate (July 17): Reported as present in Saline County on June 16.
- C. Wakeland (July 2): Reported as present in Richardson County.

FALL ARMYWORM (Laphygna frugiperda A. & S.)

- New York. N. Y. State Coll. Agr. News Letter (July 22): Light infestation generally distributed on Long Island.
- District of Columbia. W. R. Walton (July 23): Report of what is possibly this species received from the northwestern part of the city.
- Virginia. H. G. Walker (July 12): Larvae collected from sweet corn near Quinby, in Accomac County. (Det. by C. Heinrich.)
- Mississippi. C. Lyle and assistants (July 25): Injuring corn in Sunflower County and in the Meridian area. Possible that report from Chickasaw County of budworms on corn was this species.



Louisiana. J. W. Ingram (July 9): Doing serious damage to sugarcane and corn on a number of farms south of Houma on June 26. Later found in damaging numbers on sugarcane and corn in Lafourche and Vermilion Parishes, in addition to new locations in Terrebonne Parish. Fed on uncultivated grasses in sugarcane or corn rows and later ascended sugarcane or corn plants. Infestations widely scattered. Injury heaviest in varieties of cane having an upright growth and a poor stand, with some fields of cane being 30-percent defoliated and some plants almost completely defoliated. By July 2 about 50 percent of the larvae had pupated; by July 9 about 95 percent had pupated and a good percentage of moths had emerged.

WEBWORMS (Loxostege spp.)

Minnesota. M. W. Wing (July 15): Present at Lewiston. Abundant on alfalfa at Pinewood and abundant at Cambridge, Grainfield, and Baudette.

Nebraska. H. D. Tate (July 17): Specimens found to be very numerous on lawns in Hitchcock sent in on July 9.

BEET WEBWORM (Loxostege sticticalis L.)

Minnesota. A. G. Ruggles and assistants (July 6): Moths abundant and covering windows at night. Abundance noted in potato fields during day. First noticed on evening of July 4 at Cambridge, Osanti County. (July 15): Abundant at Aitken, Albert Lea, and in Hubbard County.

North Dakota. J. A. Munro (July 21): Severe injury to a few sugar beet fields reported from the Grand Forks area.

South Dakota. H. C. Severin (July 26): Considerable damage to sugar beets and garden vegetables on July 24 in the Belle Fourche area.

Nebraska. H. D. Tate (July 17): Larvae sent in from Franklin County on June 22. Adults sent in from Hall County on June 25 and reported as abundant in the yard. Adults observed to be extremely abundant in alfalfa and lawns in Hall, Polk, and Merrick Counties on July 2.

Utah. G. F. Knowlton et al. (July 27): Destroyed 3 acres out of a  $4\frac{1}{2}$ -acre sugar beet field at Elgin. Loss severe damage to beets and alfalfa at Green River.

STRAWBERRY FRUIT WORM (Cnephasia longana Haw.)

Oregon. D. C. Mote and assistants (June 25): Oviposition 90-percent complete. Damage serious on strawberries and flax.

TIGER MOTHS (Apantesis spp.)

Kentucky. W. A. Price (July 25): Larvae of A. phalerata Harr. received from Upton with statement that they were feeding on corn and tobacco.

Alabama. J. M. Robinson (July 16): Larvae reported on cotton, corn, and lespezeza at Athens, Florence, and Huntsville on June 27.

Mississippi. C. Lyle (July 25): Larvae tentatively identified as A. rectilinea French received the last week in June and the first week in July from Holmes, Hinds, and Tate Counties, where they were feeding on cotton, crotalaria, watermelon, and other plants.

SALT-MARSH CATERPILLAR (Estigmene acraea Drury)

Texas. R. K. Fletcher (July 22): Reported in Harris County on June 24, injuring cantaloup, corn, peas, and watermelon.

WHITE-LINED SPHINX (Sphinx lineata F.)

South Dakota. H. C. Severin (July 26): More abundant than usual throughout the State.

Washington. L. G. Smith (July 17): Outbreak observed on July 14 at Stoptoe and Oakdale, Whitman County. Larvae had completely stripped crested wheatgrass, mustard, and Chinese lettuce. Later marched onto garden crops and weeds about the lawn. Causing only moderate damage to potatoes and peas, as most of the larvae were maturing and entering the ground to pupate. First infestation ever noted by farmers in this district.

MAY BEETLES (Phyllophaga spp.)

Wisconsin. E. L. Chambers (July 3): Caused defoliation of oaks in northwestern part of State.

Iowa. C. J. Drake (June 28): Doing damage in meadows and cornfields in the vicinity of Northwood and Mason City. Drought a few years ago considerably decreased population throughout the eastern half of State.

Kansas. H. R. Bryson (July 30): Attacking young Chinese elms at McPherson on July 25.

JAPANESE BEETLE (Popillia japonica Newm.)

Vermont. H. L. Bailey (July 29): Adults abundant on July 24 at White River Junction, in south-central Vermont.

Rhode Island. A. E. Stone (July 26): Abundant in places previously infested, and some new places have been discovered.

Connecticut. J. P. Johnson (July 22): Beetles first reported at New Haven on June 29. Very scarce until July 8 and general emergence began on July 12, about 2 weeks late.

New York. M. D. Leonard (July 28): First adults observed at Flushing on June 30. Feeding has been moderate, owing to treatment of foliage, and mostly on upper parts.

N. Y. State Coll. Agr. News Letter (July 8): On Long Island beetles were found on Institute grounds on July 1. Very few found since then. Emergence began in Westchester County on June 28. (July 29): Emerging in large numbers in the vicinity of Kingston, Ulster County.

New Jersey. M. D. Leonard (July 18): Reported by grower of outdoor rose plants at Ridgewood as first starting to feed on July 15.

Pennsylvania. M. D. Leonard (June 30): In a rose garden at Bethlehem.

Delaware. L. A. Stearns (July 23): Conspicuous feeding noticed from Middletown in the north to Magnolia in the south. Damage severe in vicinity of Dover. Peak of activity occurred on week-end of July 21.

District of Columbia. R. A. St. George (July 15): Leaves of sycamore trees considerably injured. Many beetles in flight.

Virginia. R. A. St. George (July 15): Adults feeding on shrubbery at Arlington, near East Falls Church, believed to be first appearance in this vicinity.

#### ROSE CHAFER (Macrodactylus subspinosus F.)

Maine. E. P. Felt (July 24): Reported in numbers from Wilton.

Vermont. H. L. Bailey (July 29): Abundant throughout State.

New York. R. E. Horsey (July): Numerous in the southern part of Rochester on flowers of Sorbaria sp. and rose and on grape leaves.

N. Y. State Coll. Agr. News Letter (July 8): In Wayne County, western New York, beans and cabbage are still being attacked. (July 15): Much less numerous in Ulster County, eastern New York, than last year, but has caused light damage on grapes, apples, and peaches in a few orchards. (July 22): Found on beans in Albany County.

Michigan. R. Hutson (July 24): Throughout State south of Shelby-Saginaw line.

Indiana. J. J. Davis (July 26): Outbreak reported from Warsaw on June 22.

Wisconsin. E. L. Chambers (July 3): Very abundant in light sand areas of south and central parts of the State.

Minnesota. M. W. Wing (July 15): Abundant on roses at Saint Paul.

Iowa. C. J. Drake (June 28): Collected in large numbers during week of June 17 at Clinton and De Witt.



GRAPE COLASPIS (Colaspis brunnea F.)

Ohio. J. S. Houser (July 2): Damage to corn at Wakeman so extensive that it is wilting and dying.

T. H. Parks (July 24): Corn sample sent in from Sandusky, Erie County, with statement that plants were stunted and lower leaves dead.

Alabama. J. M. Robinson (July 16): Reported on peanuts and velvetbeans on July 9 and on corn on July 15 at Flomaton.

Mississippi. C. Lyle, et al. (July 25): Adults injuring cotton plants in Jones County and the Durant area.

Louisiana. R. C. Gaines and assistants. (July 13): Causing damage on a few acres of cotton at Transylvania, East Carroll Parish.

Indiana. J. J. Davis (July 26): Damage to corn continued until nearly July 1. Practically 90 percent of cornfields in Spencer County reported infested and many stands reduced 50 percent. Many newly set strawberry plants damaged at Jeffersonville, in the southern end of the State, some acreages showing losses of from 25 to 50 percent. Most of the larvae had pupated by June 26.

Illinois. W. P. Flint (July 26): Adults very numerous in legume fields, principally in clover and soybeans. Also found on smartweed, morning glory, and leaves of hazel, grasses, and other woody plants.

Missouri. L. Haseman (July 23): Serious damage reported in upland corn planted as late as June 1 in southeastern part of State.

Texas. R. K. Fletcher (July 22): Reported as attacking fruit, probably peaches, at Jasper on June 18.

WIREWORMS (Elateridae)

South Carolina. F. Sherman and W. C. Nettles (July 29): Sand wireworm (Horistonotus uhlerii Horn) below normal. It has been severe, following cowpeas of last year. Few following crotalaria, velvetbeans, or weeds of fallowed land.

Louisiana. C. O. Eddy (July 25): H. uhlerii is decreasing in importance. Has been unusually bad in at least four parishes northwest of Alexandria. Less damage than usual in three parishes in the extreme northern end of the State.

Wisconsin. E. L. Chambers (July 3): Weather conditions seem ideal for wireworm damage and much corn in south and central Wisconsin had to be replanted. (July 30): Heavily infesting many potato and cornfields planted in marsh lands in southern Wisconsin.

Iowa. C. J. Drake (June 28): Reported from Allison, Strawberry Point, Palo, Lynnvillie, Rock Rapids, Ames, Marshalltown, and Cherokee. Larvae seriously injuring some fields of corn.

Nebraska. H. D. Tate (July 17): Request for control received from Cuming County on June 21. Melanotus cribulosus Lec. reported as damaging corn in both Nemaha and Colfax Counties on July 5.

California. R. E. Campbell (July 5): Linonius californicus Mann. reported as doing considerable damage in many beanfields in southern California.

SAY'S STINKBUG (Chlorochroa sayi Stal)

North Dakota. J. A. Munro (July 22): Unusually large number observed at Mandan in wheatfields. Reported as causing appreciable injury in wheat plots at Dickinson a few days ago, where they were observed at the rate of 10 to 12 per foot of row.

South Dakota. H. C. Severin (July 26): Flying to lights in large numbers in central South Dakota.

Oklahoma. F. E. Whitehead (July 24): Outbreak is the most outstanding that has occurred in this State recently. Reported as having caused exceedingly severe injury in the two westernmost counties of the Panhandle, ranging up to approximately 100 percent in some fields. First record of serious injury in the State.

Utah. G. F. Knowlton and F. C. Harnston (July 19): Severely injuring wheat on some farms east of Roosevelt, in the northeastern part of the State.

EUROPEAN EARWIG (Forficula auricularia L.)

Utah. G. F. Knowlton (June 28): Large nymphs very abundant at Farmington.

Washington. L. G. Smith (July 24): Reported as causing noticeable damage to flower and vegetable gardens in Puyallup, Pierce County. Nearly all adults. Parasites much more abundant than last year.

CEREAL AND FORAGE - CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (July 27): Wheat inspected in 34 counties; county infestations ranged from 0.6 to 11.4 percent of the straws carrying flaxseeds. Average for State was 4 percent, as compared with 20.5 percent in 1939. Fly population lowest since 1918.

WHEAT MIDGE (Thecodiplosis mosellana Gehin)

Pennsylvania. E. J. Udino (June 25): Found in nearly every head of wheat examined at Cabot, Butler County. Maturing grain beginning to show evidence of damage.



Indiana. J. J. Davis (July 26): More abundant than for many years, and some conspicuous loss in yields. First reports received this month. Reported from all parts of the State.

WHEAT JOINTWORM (Harmolita tritici Fitch)

Ohio. T. H. Parks (July 27): In 34 counties where wheat has been inspected this pest has increased in some counties and caused some loss of heads in a few fields. Average for the State was 8.7 percent, as compared with 7.25 percent 1 year ago.

WHEAT STEM MAGGOT (Meromyza americana Fitch)

Minnesota. A. G. Ruggles and assistants (July 8): Reported as causing considerable trouble in Wabasha, Wabasha County.

Nebraska. H. D. Tato (July 17): Damaging wheat in Gage County on June 19.

THRIPS (Thysanoptera)

Minnesota. A. G. Ruggles and assistants (July 8): Moderately abundant at Hastings. Wheat dried up in places. Immature insects abundant at bases of leaves. Very few adults on July 5.

CORN

CHINCH BUG (Blissus leucopterus Say)

Tennessee. G. M. Bentley (July 1): Occurring in great numbers at Ripley, Lauderdale County, where they destroyed 2 acres of oats and 3 acres of corn near the oats. This is the second outbreak in the State in the last 20 years.

Ohio. T. H. Parks (July 24): No serious outbreak has developed. Enough occurred in a wheatfield in Allen County to damage seriously several rows of corn adjoining the wheat. Not numerous enough elsewhere to cause concern.

Indiana. J. J. Davis (July 26): Late reports of local outbreaks in the northern part of the State still being received. This has been a most unusual season for chinch bugs. Weather conditions until recently have slowed up development. Infestations in eastern Indiana have centered in Huntington, Wells, Adams, and Blackford Counties. In western Indiana the heaviest and most general infestations have been in Benton and White Counties, local outbreaks occurring in Newton, Lake, Jasper, Pulaski, Marshall, and Fulton Counties to the north, and in Warren, Tippecanoe, Clinton, and Montgomery Counties to the south. Despite unfavorable weather there is a heavy carry-over in the larger area of the State, where the bugs overwintered successfully.



Illinois. W. P. Flint (July 26): Infestation is very spotted. Some 25 counties required control operations. Infestation in corn above average for this time of the year, and a heavy second brood may be expected with normal weather.

Missouri. L. Haseman (July 23): Heaviest infestations have appeared in the west-central and northwestern quarters of the State. Practically all general migration from small grains to corn has ceased.

Iowa. C. J. Drake (June 28): Found in outbreak numbers in 50 to 70 counties. Favorable conditions in the late summer of 1939 caused the infestation to become heavy and widespread in 3 or 4 tiers of southern counties, extending farther north in the western half of Iowa. Winter mortality in the infested counties ranged from 7 percent in the southeastern counties to 20 to 50 percent in the southwest and 80 to 90 percent in the northwest. Surviving population in the most heavily infested counties more than sufficient to produce offspring greater than the food supply in the small grainfields. Weather conditions during spring and early summer very favorable for migration to such fields. Egg laying began about the first week in June. Control operations going on in more than 50 counties. In a number of counties some injury was done to corn by overwintered adults. A small field of sweet corn near Ames almost entirely destroyed by such adults and their offspring, which developed in the cornfield.

Kansas. H. R. Bryson (July 25): A menace to corn and sorghum crops during the last month. Infestations heaviest in northeastern and southeastern Kansas. Control operations have kept the bugs down considerably. First generation now adult, and egg laying going on. Second-generation nymphs have begun to appear in sorghum fields. High soil temperatures reduced the numbers of bugs forced to migrate from wheat stubble to cornfields. In many instances migrations were of shorter duration than usual, owing to rapid and uniform maturity of small grains. Infestations worse in the vicinity of barley fields. Recorded in McPherson County as migrating from barley growing in pasture land adjoining cultivated fields.

Nebraska. H. D. Tate (July 17): Numerous requests for control received from Richardson, Nemaha, Pawnee, Johnson, Gage, Lancaster, Otoe, Cass, Sarpy, Douglas, Saunders, Dodge, and Washington Counties, where heavy infestations have developed in most of them. On July 15 most of the bugs were in the fourth or fifth instars or adult, and migration from small grains to corn and sorghum had been largely completed.

Texas. R. K. Fletcher (July 22): Reported as attacking St. Augustine grass on July 1 in Dallas County.

FALSE CHINCH BUG (Nysius ericae Schill.)

Iowa. C. J. Drake (June 28): Extremely abundant in a 20-acre cornfield near Clarinda, the population running from 300 to 500 per hill and totally destroying the corn plants. The field had been in soybeans the previous season and was weedy.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

New Hampshire. J. G. Conklin (July 26): Very abundant throughout southern and central New Hampshire.

Massachusetts. A. I. Bourne (July 27): Development considerably later than in 1939, largely matching that of corn, which is 10 days to 2 weeks late. Larvae reported in peaches in Westboro, Worcester County, on July 6; also discovered penetrating apples on July 8 at Easton, in the northern part of Bristol County. Dropped fruit penetrated in both instances. Larvae supposed to have migrated from woods growing alongside the orchards, since there was no corn in the immediate vicinity of either.

New York. N. Y. State Coll. Agr. News Letter (July 22): First-generation infestation light on Long Island, the heaviest averaging scarcely more than 2 borers per plant and negligible ear injury. In Columbia and Rensselaer Counties, eastern New York, infestations are unusually spotty, although some fields are seriously injured. Very serious injury observed in one section of Ulster County last week. Infestations in Albany County also variable, some fields showing serious injury. (July 29): In eastern New York borers are quite scarce in sweet corn fields in Rockland County, and in Ulster County larvae were observed in ripening tomato fruits.

Indiana. J. J. Davis (July 26): Emergence began on June 13 in northeastern Indiana, which is about normal, but it is reported that flight has been far from normal, and the number of moths taken in light traps small. The period June 13 to July 7 was not favorable to moth activity, but catches were large from July 7 to 10, the heaviest catch being 190 moths, on the night of July 7. Flight still in progress.

Wisconsin. E. L. Chambers (July 30): Scouting began on July 11, and up to July 25 newly hatched larvae were picked up on five farms in Sheboygan County, on six in Fond du Lac County, on nine in Racine County, on six in Kenosha County, and on one in Walworth County.

STALK BORER (Papaipema nebris nitela Guen.)

Alabama. J. M. Robinson (July 16): Reported on tomato at Brookside on June 10.

Indiana. J. J. Davis (July 26): Very abundant, especially in the northern half of the State. First reports were received on June 26; reports still coming in. In most instances, the hosts reported have been oats, corn, and wheat, scattered reports of vegetable and flower crops being received.

Wisconsin. E. L. Chambers (July 30): Potatoes, tomatoes, and corn infested in many sections of the southern half of the State.

Minnesota. M. W. Wing (July 15): Moderately abundant on corn and potato at Milar, Clarkfield, and Blue Earth.



CORN BILLBUGS (Calendra spp.)

Ohio. T. H. Parks (July 24): Sweet corn being stunted by larvae on July 15 in Erie County. Larvae of C. parvula Gyll. found burrowing in wheat straws near the soil surface in several counties. This injury was rather severe in Warren County.

Alabama. J. M. Robinson (July 16): C. maidis Chitt. reported on corn at Hurtsboro on July 3.

Iowa. C. J. Drake (June 28): The gray-colored billbug (C. aequalis Gyll.) destroyed part of a cornfield near Sabula. It bred in large numbers in a nearby swampy area, containing rank vegetation.

SEED-CORN BEETLE (Agonoderus lecontei Chaud.)

Iowa. C. J. Drake (June 28): This beetle destroyed 145 acres of corn in Carroll County during the last week of June. Other infestations on a smaller scale were reported at Danbury, Davenport, and Logan.

CORN SILK BEETLES (Luperodes spp.)

Alabama. J. M. Robinson (July 16): L. brunneus Grotch reported on July 12 as attacking corn at Carrollton, Geneva, and Tuscaloosa.

Mississippi. C. Lyle (July 25): Specimens of L. varicornis Lec., feeding on corn, received from Copiah, Grenada, Itawamba, Jones, Perry, and Smith Counties; specimens from cotton plants received from Jones and Tippah Counties. Unusually abundant this season.

Louisiana. C. O. Eddy (July 25): L. brunneus is declining in numbers, after a very active season in the sandhills section north of Alexandria.

CORN ROOTWORM (Diabrotica longicornis Say)

South Dakota. H. C. Severin (July 26): Damage reported as occurring in the Bell, Fourche area.

CORN LEAF APHID (Aphis maidis Fitch)

Kentucky. W. A. Price (July 25): Very common on corn in central Kentucky.

Nebraska. H. D. Tate (July 17): A heavily infested sorghum plant was received on July 11 from Colfax County.

CORN ROOT APHID (Anuraphis maidi-radicis Forbes)

Iowa. H. E. Jaques (July): Light, scattered infestations found in eight counties, mostly in central Iowa.



RED SPIDERS (Tetranychus spp.)

Utah. G. F. Knowlton, et al. (July 19): Corn severely damaged at North Logan. (July 27): Injury to corn is severe in some cornfields at Moab.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

Wyoming. J. C. Hamlin (July 3): Larvae and adults collected in the Saratoga and Encampment areas of Carbon County on June 29. (Det. by W. H. Anderson and L. L. Buchanan.)

Utah. C. J. Sorenson (July 22): Less damage caused to alfalfa generally than in 1939 in Box Elder, Cache, Juab, and Millard Counties.

California. A. E. Michelbacher (July 23): On July 22 in the northwestern part of the San Joaquin Valley the number of larvae collected per 100 sweeps of the net for the different fields ranged from 4 to 23, and the number of adults from 0 to 14. In the alfalfa field adjacent to the San Francisco Bay the larval count ranged from 0 to 47, and the adult count from 0 to 2. Parasitization by Bathyploctes curculionis Thoms., based on rearing from last-stage larvae collected in the field on July 9, was slightly more than percent for the San Francisco Bay region, and 0 for the San Joaquin Valley.

STRIPED FLEA BEETLE (Phyllotreta vittata F.)

Colorado. G. M. List (July 23): Quite numerous on alfalfa this spring and summer. Noticeable injury to the hay crop in some instances, and seed production reduced by the clipping of flowers.

CLOVER ROOT CURCULIO (Sitona hispidula F.)

Oregon. R. L. Post (June 27): Collected today from an alfalfa field near Dundee, Yamhill County. (Det. by L. P. Rockwood.)

ALFALFA CATERPILLAR (Colias eurythome Bdv.)

California. A. E. Michelbacher (July 23): Larval population high in some fields in the northwestern part of the San Joaquin Valley. As many as 2,100 larvae collected per 100 sweeps of the net. In a number of fields the count neared 1,000.

PLANT BUGS (Hemiptera)

Florida. J. R. Watson (July 22): Cowpeas severely damaged by plant bugs, including Piezodorus guildinii Westw., Catorhintha guttula F., Nezara viridula L., and Leptoglossus phyllopus L.

Colorado. G. M. List (July 23): Many plantings of alfalfa show a distorted growth, owing to feeding. Seed production seriously interfered with in northern Colorado.

Utah. C. J. Sorenson (July): Moderate to heavy infestations in most alfalfa fields in Cache, Box Elder, and Millard Counties. Some bud injury now showing in alfalfa-seed fields.

A MEMBRACID (Campylenchia latipes Say)

Utah. G. F. Knowlton (July 9): Alfalfa and sweet clover damaged at Honeyville, Willard, and Utah Hot Springs.

COWPEAS

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

Georgia. T. L. Bissell (July 11): Becoming normally abundant at Experiment, central Georgia, on the first pods to develop. Almost full-grown grubs found today, a large number being parasitized.

VETCH

VETCH BRUCHID (Bruchus brachialis Fahracus)

Washington. L. G. Smith (July 10): Adults collected in every vetch field surveyed in Clark County on June 28, averaging 5 weevils per 10 sweeps of the net. No eggs found on pods.

F R U I T I N S E C T S

PEACH TWIG BORER (Anarsia lineatella Zell.)

Utah. G. F. Knowlton (July 1): Apricot fruits being injured in several parts of Weber County.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Mississippi. C. Lyle, et al. (July 25): Injury to untreated fruit trees reported from the southwestern part of the State and from the Meridian district.

Washington. E. J. Newcomer, et al. (July 18): Found on the fruit of pear in 15 of 42 orchards examined in Yakima County, indicating that it is quite common this season.

A LACEBUG (Corythucha cydoniae Fitch)

Maryland. E. H. Siegler (July 24): Found on quince foliage at Beltsville on July 23. (Det. by H. G. Barber.)

Mississippi. C. Lyle, et al. (July 25): Reported as having practically defoliated flowering quince and pyracantha in some instances in Jackson County.

Washington. E. J. Newcomer (July 18): Found in 4 out of 34 orchards in Yakima County on 3 varieties of pear.

BUFFALO TREEHOPPER (Ceresa bubalus F.)

Washington. E. J. Newcomer, et al. (July 20): Very common in some pear orchards in the Yakima Valley, particularly if cover crops of alfalfa are present.

A TARANTULA HAWK (Pepsis sp.)

Nevada. G. G. Schweis (July 20): Reported from southern Nevada that adults were seriously damaging fruits, such as grapes and peaches.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

New York. D. W. Hamilton (July 24): Bait-trap captures very light from June 24 to July 1 at Poughkeepsie, moderately heavy from July 2 to 15. Since July 15 captures have been light, but are beginning to increase. First-brood moths just beginning to emerge. Entrances in fruit have increased during the last 10 days.

N. Y. State Coll. Agr. News Letter (July 29): In eastern New York there has been considerable activity for the last 2 weeks in Rockland County, where injury is much more extensive than last year, 50 to 60 percent of injured apples being infested. A few larvae have left the apples. Damage negligible in Ulster and Clinton Counties. In western New York second-brood adults have been flying for several days, and the last of the first-brood eggs are hatching. In the Lake zone the high point of first-brood larval activity has been in progress during the last week. Considerable damage to pear in Orleans County and less in Niagara County, where apples have been left rather quickly, owing to the extremely hot weather.

Delaware. L. A. Stearns (July 23): First brood lightest recorded for the last 10 years. Second brood just beginning to hatch.

Virginia. A. M. Woodside (July 20): Infestation of apples lighter than for the last 3 years at this season in Augusta County. Emergence of first-brood moths began late, and bait-trap catches are just beginning to indicate their presence.

Ohio. T. H. Parks (July 24): Spring-brood emergence and bait-pan catches at Columbus were long drawn out, extending from May 21 to July 23. Peaks occurred on June 3 and July 2. No second-brood moths have emerged.

Michigan. R. Hutson (July 24): Heavy flight of first-brood moths appeared from July 15 to 20. Reported from all over the State.



Indiana. L. F. Steiner (July 3): First-brood counts made at Vincennes during the last week on 190 trees in 2 orchards show infestations ranging from no larvae to as many as 42 per 100 apples. Percentage of injured fruit is well above normal, and higher than in 1939, owing partly to the light crop. About 15 percent of all entrances were fresh. Adults of the first brood began emerging not later than July 1. (July 25): Treatment of 10 trees today in the Vincennes area yielded 65 adults, 5 less than a week ago. The peak is believed not to have occurred. Eggs are hatching in considerable number.

Illinois. W. P. Flint (July 26): The prolonged hatch of first-brood eggs has resulted in a heavier infestation than normal in most commercial orchards.

Missouri. L. Haseman (July 23): The second brood has been more drawn out than for many years past. Peak of emergence for the southern and northern parts of Missouri occurred July 20 to 25. Larvae of the second brood have been entering since early in July, and damage is generally less serious than for a number of years.

South Dakota. H. C. Severin (July 26): About the usual amount of damage to apples.

E. J. Newcomer (July 24): First-brood moths began emerging on June 28 at Yakima, and an increase of eggs was noted from July 6 to 9.

Oregon. B. G. Thompson (June 24): No peak flights in the Willamette Valley, but eggs have been laid on apple and pear almost every evening since May 20, making control measures difficult.

#### EYE-SPOTTED BUDMOTH (Spilonota ocellana D. & S.)

New York. N. Y. State Coll. Agr. News Letter (July 22): In western New York eggs have been hatching in the vicinity of Lyndonville since about July 12. In Olcott eggs are prevalent and just beginning to hatch. Observations on July 16 showed most eggs to be freshly laid, a few being advanced in growth to nearly hatching. Peak of moth emergence not reached in Somerset, where eggs are not numerous and all observed were freshly laid. Now hatching rapidly in infested orchards in Orleans County.

Indiana. L. F. Steiner (July 3): Some injury from young larvae now occurring in the Vincennes area.

#### FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

Missouri. L. Haseman (July 23): Infestation has moved westward across the State, particularly throughout the central part. Moth emergence was practically complete by July 1. June catch at Columbia unusually high. Reported from southeastern Missouri that there were only about 10 percent as many moths in June as a year ago, and that young larvae in any considerable numbers are blown only about 150 feet.

Nebraska. H. D. Tate (July 17): Found attacking apple in Custer County on July 1 and in Nance County on July 6. Also reported as having defoliated several large boxelder trees in Brown County on June 20.

PISTOL CASEBEARER (Colcophora malivorella Riley)

Delaware. L. A. Stearns (July 20): Larvae just hatched observed at Camden; more abundant than normally.

RED-HUMPED CATERPILLAR (Schizura concinna A. & S.)

Tennessee. G. M. Bentley (July 9): Found eating the leaves of apple trees at Rutherford, Gibson County.

APHIDS (Aphididae)

Massachusetts. A. I. Bourne (July 27): Rosy apple aphid (Anuraphis roseus Baker) a very serious pest in the southeastern section of Cape Cod. Although migration has taken place, evidence of damage is plentiful. The green apple aphid (Aphis pomi Deg.) is present in serious abundance in many orchards, infestations being the heaviest for years, and in many orchards almost all of the tip growth is infested.

Connecticut. P. Garman (July 22): Infestation of apples by A. pomi in New Haven County has continued to increase throughout June and July.

New York. N. Y. State Coll. Agr. News Letter (July 15): In eastern New York A. pomi was abundant on terminal growth and found in small numbers on the fruit during the last week in June in Ulster County. In Clinton County green aphids are building up a moderate population on a few vigorous trees. Rosy aphids still present and causing a good deal of damage in Rockland and Ulster Counties. (July 22): In western New York A. pomi is present on terminals in considerable numbers in Niagara County, and rosy aphids occurred there in sufficient numbers to cause damage in some orchards, some still being found on fruit. (July 29): Green aphids no longer are serious in Clinton County, natural enemies having held them in check.

Delaware. L. A. Stearns (July 19): Rather severe infestation of green apple aphids in orchard at Camden reported.

Ohio. T. H. Parks (July 24): A sizable outbreak of rosy apple aphids developed and some damage occurred in many orchards, although eggs of apple aphids were very scarce in the spring. Predators helped to reduce the number of aphids.

Indiana. L. F. Steiner (July 11): A. pomi seems to be increasing in the Vincennes area, despite the hot, dry weather. No serious damage observed.

Utah. G. F. Knowlton (July 9): Woolly apple aphid (Eriosoma lanigerum Hausn.) less injurious than during recent years, often being heavily parasitized when abundant.

Washington. M. A. Yothers (July 18): A very heavy infestation of E. lanigerum, found at Yakima, had been almost completely parasitized by Aphelinus mali Hald. Most of the parasites had emerged by the end of June.



WHITE APPLE LEAFHOPPER (Typhlocyba pomaria McAtee)

Connecticut. P. Garman (July 22): Very severe infestations in several large apple orchards in New Haven County.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Massachusetts. A. I. Bourne (July 27): Flies began emerging somewhat earlier than usual. Some indication of a slackening of the emergence indicates the possibility that the peak has been passed.

New York. N. Y. State Coll. Agr. News Letter (July 1): Fly emergence in cages at Poughkeepsie was halted by unfavorable weather conditions during the last week. No flies taken between June 21 and 28. First fly found in Rockland County on June 26. (July 29): Maggot-infested apples found this week in Rockland County.

Michigan. R. Hutson (July 24): Adults recovered at Bellaire on July 22.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Massachusetts. A. I. Bourne (July 27): During the last 2 weeks severe infestations have occurred throughout the State, until at present considerable bronzing has occurred, and further injury is threatened.

Connecticut. P. Garman (July 22): General outbreak, which is doing considerable damage in many apple orchards.

New York. N. Y. State Coll. Agr. News Letter (July 29): Considerable damage caused in a few scattered blocks of apples in Ulster County. In western New York, red mites are beginning to build up in some prune blocks in Orleans County.

PEACH

PLUM CURCULIO (Conotrachelus nemophar Hbst.)

Delaware. L. A. Stearns (July 23): Probable peak of emergence of first-brood adults occurred on July 16, as recorded by weekly jarring of peach trees. Unusually abundant. Few peach drops infested with first-brood grubs, owing to very heavy June drop.

Virginia. A. M. Woodside (July 20): First-brood adults began to emerge on about July 5, and peak of emergence occurred about July 13 in Augusta County. Females contained no eggs.

Georgia. O. I. Snapp (July 22): Second-generation eggs began to form in new females on July 5 at Fort Valley, central Georgia, but there has been no egg deposition. Harvest of Elberta peaches began on July 15. This is the first year since 1923 that second-generation eggs have not been ready for deposition by the beginning of this harvest, one-half of the crop having already been harvested without a second-brood attack.



Mississippi. C. Lyle, et al. (July 25): Adults said to be numerous in northwestern Mississippi. Light injury reported from the Durant and Meridian areas, and untreated trees reported as showing considerable injury in southwestern Mississippi.

Minnesota. M. W. Wing (July 15): Moderately abundant on apple at Rochester.

Missouri. L. Haseman (July 23): Stone plums and some early apples quite severely stung earlier in the season. Since July 20 most of the larvae observed in central Missouri have been from half to almost full grown.

South Dakota. H. C. Severin (July 26): Usual amount of damage being done to plums.

#### ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (July 22): Infestation of peaches apparently less at present than in 1939.

New York. N. Y. State Coll. Agr. News Letter (July 22): Causing twig injury to peaches in western New York.

Delaware. L. A. Stearns (July 23): First-brood larvae found parasitized as follows: Sussex County, 55.1 percent; Kent County, 80.2 percent; and New Castle County, 62.4 percent. Average for State is 67.5 percent. Parasitization on the eastern side of Sussex County was very low, and there was considerable fruit infestation for the first time in several years.

Mississippi. C. Lyle, et al. (July 25): Injured peach twigs received from Leake County, and reports of similar injury received from Attala, Holmes, and Madison Counties, and from northwestern Mississippi.

Missouri. L. Haseman (July 23): In southeastern Missouri third-brood moths began to appear on July 4, the peak of activity occurring around July 15. A preliminary check on parasitization of the light second-brood larvae shows comparatively few parasites emerging.

#### PEAR

##### PEAR PSYLLA (Psylla pyricola Foerst.)

New York. N. Y. State Coll. Agr. News Letter (July 29): Rather abundant and threatening injury in Ulster County. In western New York pear psyllas are now largely in the hard-shell and adult stages in Niagara County, where considerable injury has occurred in some orchards.

##### PEAR LEAF BLISTER MITE (Eriophyes pyri Pgst.)

Washington. E. J. Newcomer, et al. (July 18): Found in 19 out of 42 pear orchards examined in Yakima County.

A LEAF MIDGE (Dasyneura pyri Bouche)

Connecticut. E. P. Felt (July 24): Specimen of injury received from Noroton Heights, where it is evidently abundant.

CHERRY

CHERRY FRUITFLY (Rhagoletis cingulata Loow)

New York. D. W. Hamilton (July 24): A few adults taken in emergence cages in Columbia County as late as July 7, which is about 1 week later than usual.

Oregon. S. C. Jones (June 24): Peak of emergence reached in earliest locations in the Willamette Valley on June 3, and in the later locations on June 11. Eggs found in laboratory on June 5 from flies that emerged on May 22. Eggs found in field on June 13. First larvae found in field on June 17.

BLACK CHERRY APHID (Myzus cerasi F.)

Utah. C. J. Sorenson (June 15): Infestation at Brigham during May and June excessive, fruit in some orchards being rendered unmarketable. Infestation has now largely subsided.

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

Minnesota. M. W. Wing (July 15): Scarce to moderately abundant on plum at Anoka, Foreston, and Kiester.

RASPBERRY

RASPBERRY CANE BORER (Oberca bimaculata Oliv.)

New Hampshire. J. G. Conklin (July 26): Much more prevalent this year than in 1939.

Minnesota. M. W. Wing (July 15): Moderately abundant on raspberries at Gaylord and Black Duck.

RED SPIDERS (Tetranychus spp.)

Utah. G. F. Knowlton (July 6): Red raspberry foliage seriously damaged at Kanab. Foliage on some parts of the field largely dried up and brown. (July 9): Light injury caused to raspberries at Brigham.

CURRENT

GOOSEBERRY FRUITWORM (Zophodia convolutella Hbn.)

Utah. G. F. Knowlton (July 3): Red currents damaged at Provo.

A PSYLLID (Arytaina ribesiae Crawford.)

Utah. G. F. Knowlton (July 9): Light injury caused to black currants in northern Utah. Seldom severely injurious in general, but conspicuous injury occasionally caused to a few bushes.

CURRENT APHID (Capitophorus ribis L.)

Utah. G. F. Knowlton (July 2): Red currant foliage damaged in northern Utah.

CURRENT FRUITFLY (Epochra canadensis Loew)

Utah. G. F. Knowlton (July 3): Black currants infested at Perry and Hooper.

GRAPE

GRAPE BERRY MOTH (Polychrosis viteana Clem.)

New York. N. Y. State Coll. Agr. News Letter (July 29): Occasionally found in some vineyards in Ulster County, eastern New York.

Georgia. T. L. Bissell (July 19): A few berries ruined in bunch grapes, less than one per bunch, at Experiment, central Georgia. Only two small larvae found; most of the infested fruit deserted.

Michigan. R. Hutson (July 24): Heavy flight from July 8 to 20 at Paw Paw, Lawton, and Benton Harbor in southern Michigan.

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

Mississippi. C. Lyle, et al. (July 25): Reported as numerous in Grenada and Tallahatchie Counties.

Missouri. L. Haseman (July 23): Since the middle of July there has been evidence of pick-up in the numbers of grape leaves folded, especially on untreated vines, in central Missouri.

GOLDSMITH BEETLE (Cotalpa lanigera L.)

Missouri. L. Haseman (July 23): A few complaints of serious defoliation of home vineyards received from central Missouri. Since July 20 considerable numbers have been coming to lights at night at Columbia.

A GRAPE ROOTWORM (Fidia longipes Melsh.)

Arkansas. D. Isely (July 23): Adults attracted more attention in northwestern Arkansas than in any year since 1928. In some vineyards they were abundant enough to cause damage to foliage.



GRAPE LEAFHOPPER (Erythroncūra comes Say)

New York. N. Y. State Coll. Agr. News Letter (July 15): Hatching in Chautauqua County, western New York, but observations indicate that the infestation is not so great as last year. (July 22): Nymphs have been hatching rapidly in Niagara County, and others are still appearing. Season is a week or more behind last year. (July 29): Hatching about completed in Ulster County, eastern New York, but nymphs seem less numerous than usual. Very abundant in Niagara County, and some nearly in the adult stage.

North Dakota. J. A. Munro (July 21): Very abundant at Mandan and Garrison; scarce to moderately abundant at Fargo and Jamestown.

Kansas. H. R. Bryson (July 30): Reported as abundant on grapes at Medicine Lodge.

Nebraska. H. D. Tate (July 17): Request for control information received from Platte County on July 3. Taken from woodbine in York County on July 10.

Utah. G. F. Knowlton and F. C. Harmston (July 27): Grape foliage severely damaged at Moab; 75-percent defoliation caused to some varieties.

GRAPEVINE APHID (Aphis illinoisensis Shim.)

Arizona. P. Simmons (May 18): Occasional cane tips heavily infested at Phoenix. (Det. by P. W. Mason.)

PECAN

PECAN WEEVIL (Curculio caryae Horn)

Georgia. T. L. Bissell (July 18): Beginning to emerge, one punctured nut being found in each of two pecan orchards at Milner and Griffin, central Georgia.

PECAN CARPENTER WORM (Cossula magnifica Stkr.)

Mississippi. C. Lyle, et al. (July 25): Heavy infestation of pecan trees reported from George County.

PECAN PHYLLOXERA (Phylloxera devastatrix Perg.)

Mississippi. C. Lyle, et al. (July 25): Galls on pecan observed at several places in the southern end of the Yazoo-Mississippi Delta.

A MITE (Eriophyes caryae Keifer)

Oklahoma. E. Hixson (July 5): Found on pecan leaves. This condition seems rather widespread in pecans in eastern Oklahoma and is causing considerable alarm. (Det. by H. H. Keifer.)

FILBERT

A FILBERT MOTH (Melissopus latiferreanus Wlsm.)

Oregon. B. G. Thompson (June 25): Adults are beginning to emerge in filbert orchards in the Willamette Valley. Apparently slightly more numerous than last year.

CITRUS

ORANGE TORTRIX (Argyrotaenia citrana Fern.)

California. R. S. Woglum (July): Small larvae appeared during June, but not in large numbers; beginning to puncture ripe fruit, but little drop caused.

BLACK SCALE (Saissetia oleae Bern.)

California. R. S. Woglum (July): In most areas of southern California hatch is more advanced than at this time last year. In interior areas development has been slower. In the coastal double-brooded areas this scale is generally more reduced in numbers than for several years. On the other hand, in such interior areas as western San Bernardino, and in parts of Riverside and interior Los Angeles Counties, there has been an increase, although not serious enough to affect production, with the exception of occasional groves. Severe condition exists in many orchards from Cucamonga eastward to Redlands.

CALIFORNIA RED SCALE (Aonidiella aurantii Mask.)

California. R. S. Woglum (July): Population built up during the winter and is now heavier generally than a year ago. Summer hatch, especially in the interior, is early and already moving onto new fruit in some orange orchards. Similar conditions observed on lemons.

PURPLE SCALE (Lepidosaphos beckii Newm.)

Louisiana. I. J. Becnel (July 25): Infestations general but not so severe as at this time last year. Treatments have aided materially in reducing the population.

California. R. S. Woglum (July): First hatch now so complete that control may be effected.

CITRUS MEALYBUG (Pseudococcus citri Risso)

Florida. H. Spencer (July 22): Appearing on the lower east coast, especially in grapefruit groves.

CITRUS RUST MITE (Phyllocoptes oleivorus Ashm.)

Louisiana. I. J. Becnel (July 25): Citrus in Plaquemines Parish not being so severely damaged as in 1939. Infestations have not increased much this season.

FIG

A SCOLYTID (Stephanoderes ficus Hopk.)

Texas. H. J. Reinhard (July 13): Noticeable damage caused to figs in the vicinity of Dickinson. (Det. by M. W. Blackman.)



TRUCK - CROP INSECTS

BLISTER BEETLES (Meloidae)

New Hampshire. J. G. Conklin (July 26): Epicauta pennsylvanica Deg. and E. cinerea Forst. have been particularly active in the central part of the State and along the Connecticut River Valley. Potato crops have been damaged.

Vermont. H. L. Bailey (July 29): E. pennsylvanica and E. cinerea more abundant than usual, particularly on potatoes.

New York. M. D. Leonard (July 17): Considerable blister beetle infestation reported on raspberries and roses in a garden at Buffalo.

N. Y. State Coll. Agr. News Letter (July 29): Blister beetles have attacked potatoes in some places in western New York.

M. Crispino (July 20): Macrobasis fabricii Lec. found attacking Italian beans on July 16 at Painted Post. (Det. by H. S. Barber.)

South Carolina. F. Sherman and W. C. Nettles (July 29): E. pennsylvanica was severe on crotalaria in Chesterfield County.

Tennessee. G. M. Bentley (July 9): E. vittata F., E. pennsylvanica, and E. cinerea quite numerous in the western counties.

Alabama. J. M. Robinson (July 16): Striped blister beetle (E. vittata) reported on cotton at Red Bay and Lowndesboro on June 11, and on vegetables at Russellville on June 17.

Mississippi. C. Lyle, et al. (July 25): Specimens of E. lemniscata F. received from Clarke, Grenada, Lafayette, Yalobusha, and Yazoo Counties, where they were attacking potatoes, tomatoes, and beans. Reports of this species as attacking garden crops received from Meridian area, and said to be abundant on tomatoes and flowers in Panola and Tate Counties.

Michigan. R. Hutson (July 24): E. cinerea sent in from Yale.

M. D. Leonard (July 15): Heavy infestation reported in garden at Detroit. Several kinds of flowers being eaten.

Wisconsin. E. L. Chambers (July 3): E. pennsylvanica very abundant throughout the State, feeding on alfalfa, potatoes, and garden crops.

Minnesota. M. W. Wing (July 15): M. unicolor is moderately abundant on a caragana tree at Ivanhoe. Moderately abundant at Elk River, Clarkfield, and Minneapolis.

A. G. Ruggles and assistants (July 5): Very abundant in Clay County. In Marshall County beetles were moderately abundant on alfalfa and sweet-clover. Caragana hedges stripped. Attacking alfalfa and garden at Mahanomen, Mahanomen County.



Iowa. H. E. Jaques (July): Found in many counties over the State.

North Dakota. J. A. Munro (July 21): Fairly generally distributed and causing serious defoliation of potatoes, caragana hedges, and green ash. Spotted gray species predominates on the potatoes. More than six species were encountered in the Oakes, Jamestown, Bismarck, and Minot vicinities between July 17 and 19.

South Dakota. H. C. Severin (July 26): Especially abundant in the Rosebud area.

Kansas. H. R. Bryson (July 25): Epicauta spp. abundant in many western counties. Injury to leaves of young Chinese elm trees at Jewell.

Nebraska. H. D. Tate (July 17): Reported as injuring garden crops, including potatoes, in Saline, Clay, Merrick, Gosper, Buffalo, Custer, Phelps, and Lincoln Counties during the period June 16 to July 15, inclusive. A specimen of M. unicolor was sent in from Boone County with the report that it had been found attacking a locust tree. Specimens of E. cinerea, taken from an alfalfa field in Greeley County, were sent in on June 19.

Utah. G. F. Knowlton (July 15): Spotted blister beetle (E. maculata Say) observed in damaging abundance in sugar-beet and alfalfa fields in several northern localities during the last few weeks. (July 26): The infestation of Epicauta sp., damaging alfalfa at Clearfield, was very heavy.

Washington. L. G. Smith (July 3): Blister beetles reported for the first time on June 28 in Yakima County. Attacking a privet hedge in the South Nob Hill district, but no serious damage.

#### CUCUMBER BEETLES (Diabrotica spp.)

New Hampshire. G. J. Conklin (July 26): D. vittata F. very abundant.

Vermont. H. L. Bailey (July 29): D. vittata very abundant in central part of State.

Massachusetts. A. I. Bourne (July 27): D. vittata appeared unusually late and have been fewer than normal in most cases. Heavy concentration in cucumber or melon fields reported. Infestation appears to be much more spotty than usual.

Virginia. A. M. Woodside (July 20): D. duodecimpunctata F. was feeding on leaves of lima beans and pods of snap beans at Staunton.

Mississippi. C. Lyle, et al. (July 25): D. duodecimpunctata reported as injuring roses in Lee County and dahlias in the Meridian area. D. duodecimpunctata and D. vittata reported as injuring squash, cucumbers, and cantaloups in Calhoun, Grenada, Yalobusha, Attala, and Sunflower Counties, in the Meridian and Poplarville districts, and in the northwestern part of the State.

Ohio. T. H. Parks (July 24): Striped cucumber beetles very abundant generally this summer and have caused cucumber and melon growers a great deal of trouble. Still abundant in blossoms, and bacterial wilt disease is beginning to appear.

E. W. Mendenhall (July 25): D. duodecimpunctata is causing a good deal of damage to cucumber vines in Franklin County.

Michigan. M. D. Leonard (July 14): D. vittata reported as doing considerable damage to several kinds of garden flowers in a garden at Detroit.

Wisconsin. E. L. Chambers (July 30): Striped cucumber beetle very abundant in gardens of southern Wisconsin, infesting principally cucumbers, melons, and squash.

Missouri. L. Haseman (July 23): Fewer complaints than usual received on striped and spotted cucumber beetles, but larvae of the latter began to show up on July 22 in bottom corn in southeastern Missouri. Fewer beetles than usual throughout central Missouri.

Iowa. H. E. Jaques (July): D. vittata reported as scattered throughout the State.

Nebraska. H. D. Tate (July 17): Striped cucumber beetle attacking cucumber plants in Phelps County on July 3 and in Saline and Lancaster Counties on July 9.

California. A. E. Michelbacher (July 23): D. soror Lec. caused some localized damage to fruit at Brentwood. Large populations encountered in some orchards. As many as 1,250 collected from a single tree, and in a few orchards the average number per tree ranged between 400 and 500.

R. E. Campbell. (July 24): Heavy infestation of D. trivittata Mann. and D. soror reported as having caused widespread injury to melons, vines, and vine roots during June in the Imperial Valley.

A SCARABAEID (Pleurophorus ventralis Horn)

Alabama. J. M. Robinson (July 16): Reported on peas and peanuts at Clayton on July 9.

CARROT BEETLE (Ligyrus gibbosus Deg.)

Indiana. J. J. Davis (July 26): Reported as attacking sweet sultan roots at Mulberry, central Indiana, on June 29.

South Dakota. H. C. Severin (July 26): Flights are very heavy over most of the State at the present time.

Nebraska. H. D. Tate (July 17): Attacking carrot and parsnip plants and marigolds in Adams County on June 19.



RHUBARB CURCULIO (Lixus concavus Say)

Ohio. T. H. Parks (July 24): Larvae and adults reported as seriously injuring rhubarb at Bridgeport, Belmont County.

Michigan. R. Hutson (July 24): Numerous at Allegan and Dearborn.

POTATO STALK BORER (Trichobaris trinotata Say)

Indiana. J. J. Davis (July 26): Damaging eggplants at Columbus, south-central Indiana, on July 15.

MELON APHID (Aphis gossypii Glov.)

Ohio. T. H. Parks (July 24): Causing moderate damage to cucumber plantings on two truck farms 15 miles west of Cleveland, Lorain County, on July 20.

Oklahoma. F. E. Whitehead (July 24): Severe in truck-growing area near Muskogee, particularly in cantaloups.

Nebraska. H. D. Tate (July 17): Heavy infestations observed on cucumber vines in Hitchcock County on June 26.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Washington. L. G. Smith (July 17): Fifteen percent of leaf area of potatoes on a ranch in Kittitas County reported as destroyed by first-generation adults on July 9. More than 15 times as numerous as last month and much more numerous than last year.

POTATO FLEA BEETLES (Epitrix spp.)

New York. N. Y. State Coll. Agr. News Letter (July 29): First generation causing little damage in Long Island. (July 29): Less than usual amount of damage in Cortland County, western New York. About the same as last week in Genesee County.

Michigan. R. Hutson (July 24): E. cucumeris very common at Kalamazoo, Paw Paw, and Benton Harbor.

North Dakota. J. A. Munro (July 21): Abundant at Fargo; scarce at Park River on July 10.

South Dakota. H. C. Severin (July 26): Especially bad on potatoes and tomatoes in eastern part of State.

Utah. G. F. Knowlton (July 9): Damaging potato foliage at Millville and Logan. (July 19): Caused moderate injury to potatoes in a number of Weber County localities.

Nevada. G. G. Schweis (July 29): Causing some damage in the Lovelock area.

Washington. L. G. Smith (July 10): County-wide infestation reported on July 1 in Wahkiakum County. Potatoes and other root crops were being severely damaged.

TOMATO FRUITWORM (Heliothis armigera Hbn.)

South Carolina. F. Sherman and W. C. Nettles (July 29): Damage severe on early crop of tomatoes.

Mississippi. C. Lyle et al. (July 25): Reported as causing serious damage to tomatoes generally.

Kentucky. W. A. Price (July 25): Some injury to early tomatoes at Lexington.

Washington. Ortho News (July 22): Reported as attacking tomato fruit in plantings near Yakima.

California. A. E. Michelbacher (July 23): Appearing in tomatoes in northern section of State. Infestation scarce, although it runs to 4 percent in some places.

HORNWORMS (Protoparce spp.)

Utah. G. F. Knowlton, et al. (July 2): Tomato hornworm was causing moderate damage to tomatoes in two fields examined at Utah Hot Springs, Weber County. (July 15): Were defoliating from 2 to 5 percent of tomato plants examined in fields near Tremonton and Perry.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

New York. N. Y. State Coll. Agr. News Letter (July 29): Not numerous on Long Island. Nymphs of first generation are in second and third instars. (July 29): In Genesee County, western New York, nymphs of various instars were noticed causing some damage to potatoes.

Kentucky. W. A. Price (July 25): Very abundant in central Kentucky in the middle of month. Both spring-sown and old plantings of alfalfa reported as injured from several counties.

Iowa. H. E. Jaques (July): Scattered infestations throughout State.

Kansas. H. R. Bryson (July 30): Abundant late in June and during July. Caused considerable tipburn to potatoes.

North Dakota. J. A. Munro (July 21): Moderately abundant and fairly generally distributed.

South Dakota. H. C. Severin (July 26): Causing considerable damage to potatoes over the State, at times killing entire plantings.



Nebraska. H. D. Tate (July 17): Reported as damaging potato in Douglas and Dodge Counties on July 2. Also reported as causing injury to beans in Otoe and Clay Counties on June 28 and July 2, respectively.

A LEAFHOPPER (Empoasca filamenta De L.)

Utah. G. F. Knowlton (July 9): Light injury on potatoes at Ogden and Logan.

POTATO PSYLLID (Paratrioza cockerelli Sulc)

North Dakota. J. A. Munro (July 21): Few taken at Bismarck and Minot between July 17 and 19.

Colorado. G. M. List (July 23): Less numerous than usual on tomatoes in northern Colorado. No serious psyllid yellows have developed.

Utah. G. F. Knowlton (July 26): Injury has been moderate to scarce.

POTATO APHID (Macrosiphum solanifolii Ashm.)

New York. N. Y. State Coll. Agr. News Letter (July 29): Almost completely disappeared on Long Island during week ended July 20. Predatism and parasitization became dominant. Serious injury produced during period of abundance but very few remaining. In western New York, in Genesee County, a few can be found.

Utah. G. F. Knowlton (July 9): Injuring white wild geranium in canyon above Huntsville.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

New Hampshire. J. G. Conklin (July 26): Rather scarce in southeastern New Hampshire, but abundant in central part of State.

Connecticut. M. P. Zappe (July 23): Injury in town of Hamden reported as light on beans, as compared with previous years.

New York. N. Y. State Coll. Agr. News Letter (July 22): Not so numerous generally over the State as last year. In most places up-State the first brood of larvae is from one-half to two-thirds grown. Somewhat destructive on Long Island; moderately destructive on snap beans in the Hudson Valley; and destructive in spots in the Ontario Lake counties; in Onondaga County grubs are very scarce; less abundant in Monroe County than last year; scarce in Niagara County; and in Erie County fields of snap beans show from 2 to 5 percent of plants infested, with grubs one-half to two-thirds grown.

South Carolina. F. Sherman, et al. (July 29): Very severe early in season. Some indications of subsidence during the recent hot weather.

Georgia. T. L. Bissell (July): Pupae were abundant on bean leaves at Experiment, central Georgia, on June 19, and new adults emerging.

Tennessee. L. B. Scott (July 10): Severe damage noted in snap and lima beans in north-central part of State.

G. M. Bentley (July 26): Reported as doing serious damage to bunch beans in Trezevant section of Carroll County on July 6. Present in several parts of State.

Alabama. J. M. Robinson (July 16): Reported on beans at Myrtlewood, Andalusia, and Auburn on July 3.

Mississippi. C. Lyle, et al. (July 25): Specimens received from Benton, Neshoba, Noxubee, Smith, Union, and Webster Counties, where they were feeding on beans. Reports of injury also received from Jasper, Jones, Lauderdale, Lee, Oktibbeha, and Webster Counties. Reported as moderately abundant in Lafayette County, as numerous in the northern part of Yalobusha County, as doing unusually heavy damage in northeastern Mississippi, as generally heavy in the Meridian area, and as severely injuring beans and soybeans in Scott County.

Ohio. T. H. Parks (July 24): Not very abundant on beans.

E. W. Mendenhall (July 25): Doing some damage to lima beans in Franklin County.

Missouri. L. Haseman (July 23): First overwintered adults reported in southeastern Missouri in gardens on June 4; first eggs observed on June 6; hatching observed on June 9, pupating on June 26; and adults beginning to emerge on July 3. No eggs of July brood found by July 12.

Utah. G. F. Knowlton, et al. (July 24): Severe-to-moderate injury occurring in beanfields at Moab.

A SCARABAEID (Anomala undulata Melsh.)

Mississippi. C. Lyle (July 25): Adults received on July 15 from Neshoba County, where they were feeding on beans.

LIMA BEAN VINE BORER (Monoptilota pergratialis Hulst)

Delaware. L. A. Stearns (July 5): Fifty percent of large planting of pole limas at Lincoln seriously infested.

PEAS

PEA WEEVIL (Bruchus pisorum L.)

Colorado. G. M. List (July 23): Quite numerous in home gardens and market-garden plantings around Fort Collins, as high as 40 percent of the later peas being infested.



Utah. G. F. Knowlton (July 1): More abundant than at any time during the preceding 15 years. Infestation built up through 1938 to 1940 in a number of localities.

Washington. L. G. Smith (July 3): No adults found at Sequim, but four pods contained eggs. One weevil obtained from 225 sweeps at Agnew, 3 from 25 sweeps, and 2 from 25 sweeps in Canadian field peas. Field was just coming into full bloom. In San Juan County on June 24, partially grown larvae were found within seeds of garden peas at Lopez, averaging 2 or 3 per pod. In Jefferson County, on June 24, no weevils were found out of 325 sweeps in a field of Austrian peas at Center. Out of 50 pods, 1 pod was found containing 1 egg. No weevils found at Chimaçum; however, 3 out of 15 pods had 1, 3, and 3 eggs, respectively. (July 10): Eggs present on pods of peas at Bangor, Kitsap County, on June 30. No adults observed. Some larvae had entered the seeds.

A WEEVIL (Sitona lineata L.)

Washington. L. G. Smith (July 3): From 10 to 20 collected in seed pea fields of San Juan County on June 27. Foliage badly scalloped and stands were poor. Larvae, pupae, and adults were collected in soil by digging and screening roots of pea plants. Two adults found that had apparently just emerged from pupal stage.

PEA APHID (Macrosiphum pisi Kltb.)

New York. N. Y. State Coll. Agr. News Letter (July 29): Some damage to peas in Cortland County.

Wisconsin. C. L. Fluke (July 23): Infestation very heavy on alfalfa in southeastern and southern parts of State.

North Dakota. J. A. Munro (July 21): Moderately abundant at Fargo and Bismarck.

Utah. G. F. Knowlton, et al. (July 1): Injury to pods and vines occurred in peafields in various parts of northern Utah. Heavy infestations occurring in some fields in Cache County and near Spanish Fork during 1939 were uncommon during 1940. Heavy infestations in alfalfa in several places earlier in the season. (July 25): Reported as causing serious injury to early pod peas in Iron County. Last year 37 carloads were shipped, as compared with only 5 this year, although the acreage was similar.

Washington. L. G. Smith (June 17): Severe damage to peas resulted in untreated areas in the Montesano locality of Grays Harbor County. Late peas have low populations of winged adults and immature nymphs. (July 3): Severe damage observed although there was a low population of aphids on San Juan Island on June 27. Damage to vetch light.



PEA MOTH (Laspeyresia nigricana Steph.)

Washington. L. G. Smith (July 3): Damage to garden peas observed on June 27 at Lopez, San Juan County. Small larvae found in pods.

CABBAGE

CABBAGE SHOOT WEEVIL (Ceutorhynchus assimilis Payk.)

Washington. L. G. Smith (June 26): Observed on June 17 that most of the larvae had emerged from pods on early varieties of cabbage at Montesano. Later varieties still had some larvae present in the pods. One field observed had an estimated 50-percent infestation, and some pods had two or three larvae present. Injury heavier than in previous years. Adults found on wild mustard in bloom. (July 3): Two adults collected on mustard in San Juan County on June 27. Found on wild mustard on a farm at Carlsborg, in Clallam County, on June 24, when pods contained very small larvae. A few dried seed-cabbage stalks near Fredonia, Skagit County, had pods infested on June 26. (July 17): Estimated from observations in Grays Harbor County that from 40 to 50 percent damage to cabbage seed has been caused this year.

CABBAGE CURCULIO (Ceutorhynchus rapae Gyll.)

Wisconsin. C. L. Fluke (July 23): Larvae beginning to pupate on July 17. Found infesting radish tops and many cruciferous plants, but particularly all wild mustards.

IMPORTED CABBAGE WORM (Pieris rapae L.)

New York. N. Y. State Coll. Agr. News Letter (July 29): In Cortland County cabbage worms have been damaging cabbage in some fields. About 50 percent of the plants in one field visited had two larvae present. In Wayne County, eggs have largely hatched, although numbers are smaller than usual.

Mississippi. C. Lyle, et al. (July 25): Causing injury to collards in the Durant area and to late cabbage in the Meridian area.

Indiana. J. J. Davis (July 26): Damaging cabbage at Salem on June 22.

Nebraska. H. D. Tate (July 17): Cabbage plants in Antelope County were found to be infested on June 20.

Washington. L. G. Smith (July 10): Reported as stripping young plants on Puget Island, Wahkiakum County, on July 1 which is 3 weeks earlier than usual.

DIAMONDBACK MOTH (Plutella maculipennis Curt.)

New York. N. Y. State Coll. Agr. News Letter (July 29): Much more common than usual in Erie County during week of July 15, but has not caused commercial injury to early cabbage and cauliflower.

Oklahoma. F. E. Whitehead (July 24): Severe on cabbage.

Washington. L. G. Smith (July 3): Severe defoliation of horseradish was observed in Snohomish County on June 25. Some 20 to 50 ~~larvae~~ were found on some leaves. Many adults observed flying. Larvae were observed feeding on June 26 at Fredonia doing moderate damage.

CABBAGE LOOPER (Autographa brassicae Riley)

Tennessee. L. B. Scott (July 19): Seriously damaged cabbage in the north-central part of the State.

HARLEQUIN BUG (Murgantia histrionica Hahn)

South Carolina. F. Sherman, et al. (July 29): Throughout the early season the harlequin bug was below normal, in consequence of severe winter.

Mississippi. C. Lyle, et al. (July 25): Reported as injuring collards in Benton, Holmes, and Leake Counties. Turnips injured in the Meridian territory.

CABBAGE APHID (Brevicoryne brassicae L.)

Utah. G. F. Knowlton (July 9): Damaging cabbage in home gardens in northern Utah.

Washington. L. G. Smith (July 3): Observed on dead and dried seed cabbage stalks near Fredonia on June 26. (July 17): One cabbage-seed field observed in Skagit County is a total loss.

CABBAGE MAGGOT (Hylemya brassicae Bouche)

Minnesota. A. G. Ruggles and assistants (June 29): Very abundant in Mord, Kanabec County.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

New York. N. Y. State Coll. Agr. News Letter (July 22): Eggs are hatching fast. More numerous than in average seasons generally.

Tennessee. L. B. Scott (July 19): Moderately abundant in the north-central part of the State on summer squash and cucumber.

Mississippi. C. Lyle, et al. (July 25): Observed on squash in Leake County and in the Meridian territory.



Wisconsin. E. L. Chambers (July 30): Very abundant in truck gardens and on Hubbard squash, serious losses being reported.

Iowa. C. J. Drake (June 28): Found on young squash vines at Jefferson, Cherokee, Glennwood, Perry, and Ames. Normally abundant.

H. E. Jaques (July): Reported as light in eastern half of State with heavier infestations in the southwestern part.

Nebraska. H. D. Tate (July 17): Complaints of injury to squash received from Antelope, Douglas, Hitchcock, Madison, Phelps, and Redwillow Counties from July 3 to 15.

Oklahoma. F. E. Whitehead (July 24): Injury severe in the truck-growing area near Muskogee, with squash, watermelon, and cantaloup attacked.

Texas. R. K. Fletcher (July 22): Cantaloup and watermelon severely injured on June 29 in Tarrant County, and cantaloup severely injured in Lamar County on June 25.

Utah. G. F. Knowlton (July 2): Squash damaged at Nibley and Logan. (July 15). Injury reported from Farmington, Holladay, and Springville. (July 18): Squash damaged at Layton.

Washington. L. G. Smith (June 26): Reported on June 20 that squash and pumpkins were attacked near Touchet and at the State line, severe damage being done. Reported on June 18 from Franklin County that the bugs were plentiful at Riverview, near Pasco, and that squash was being attacked.

H. P. Lanchester (July 22): Reported as completely destroying winter squash at Walla Walla.

SQUASH BORER (*Melittia satyriniformis* Hbn.)

New York. N. Y. State Coll. Agr. News Letter (July 15): Eggs being laid about 2 weeks later than usual on Long Island; the earliest ones have hatched.

North Carolina. D. L. Wray (July 2): Observed causing considerable damage to squash in Lewisville, Forsyth County.

Mississippi. C. Lyle, et al. (July 25): Light infestation reported from the Meridian area.

PICKLEWORM (*Diaphania nitidalis* Stoll)

Mississippi. C. Lyle, et al. (July 25): Observed in squash blooms in Leake County, and heavy infestations were reported from the Meridian area, where cucumbers were being injured, and at State College, where cantaloups were infested.

ASPARAGUS

ASPARAGUS BEETLES (Crioceris spp.)

New Hampshire. J. G. Conklin (July 26): Asparagus beetles, especially C. duodecimpunctata L., unusually abundant in New Hampshire.

Utah. G. F. Knowlton, et al. (June 25): C. asparagi L. was found infesting asparagus at Logan. First time it has been found in Cache Valley.

Washington. L. G. Smith (July 24): Reported that second-generation adults of C. asparagi were appearing in numbers, mating, and ovipositing on July 18 at Puyallup and Sumner, Pierce County. Damage to asparagus light up to now. Second-generation adults of parasites were also appearing in numbers in localities where liberations had been made.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

Michigan. R. Hutson (July 24): Becoming common on onions at Utica, Grand Rapids, East Lansing, and Marshall.

Utah. G. F. Knowlton (July 9): Injury to onions reported from Roy. (July 26): Injury to onions is occurring at Ogden and Farmington.

Idaho. H. C. Hallock (July 8): Reported as heavily attacking onion in the vicinity of Twin Falls.

LETTUCE

SIX-SPOTTED LEAFHOPPER (Macrosteles divisus Uhl.)

New York. N. Y. State Coll. Agr. News Letter (July 1): Quite a few found in lettuce fields in Oswego County, western New York; no yellows found. (July 15): Numerous on lettuce in Orleans County, western New York. (July 29): Nymphs are appearing in the fields now being cut in Genesee County.

SWEET CORN

CORN EAR WORM (Heliothis armigera Hbn.)

New York. N. Y. State Coll. Agr. News Letter (July 22): Still very scarce on Long Island. Overwintering survival apparently lower than usual. Less than 1 percent of maturing sweet-corn ears infested during the last week. Such larvae as were present were of the earlier instars. (July 29): First infested corn found on July 24 in Rockland County, eastern New York. About 1 percent of the ears injured to date. Present in small numbers in sweet-corn plantings in Erie County, western New York.



Mississippi. C. Lyle, et al. (July 25): Specimens received from Chickasaw County. Also reported as causing serious damage to corn in northeastern Mississippi, where most ears are infested. Heavy damage to corn caused in the Meridian area; observed on corn in Humphreys County.

Louisiana. C. O. Eddy (July 25): Adults very abundant at Baton Rouge.

Illinois. R. A. Blanchard, and A. F. Satterthwait (July): First appearance somewhat later than in 1939, but damage to early sweet corn in the East Saint Louis area, as well as in southeastern Missouri, was severe in cornfields, which matured between July 6 and 17. First eggs observed on sweet corn in central Illinois on June 5. Small gardens heavily infested by July 17, and corn from these gardens was badly damaged.

Missouri. L. Haseman (July 23): Corn now ready for market shows a high percentage of injury, most of the larvae being from one-half to two-thirds grown on July 22 in central Missouri.

R. A. Blanchard and A. F. Satterthwait (July): Fields of early dent corn in southeastern Missouri heavily infested by July 17.

Kansas. H. R. Bryson (July 25): Whereas early sweet corn carried a heavy population of larvae, later plantings were almost free of them.

Texas. K. P. Ewing, et al. (July 13): At Riesel, McLennan County, 3,600 ears of corn were examined and showed an average of 42.4 exit holes per 100 ears, as compared with 24.8 exit holes per 100 ears last week. (July 20): Examination of 3,600 ears of corn at Riesel showed an average of 59.05 exit holes per 100 ears. (July 27): Average per 100 ears this week was 65.7 exit holes; 3,600 ears examined.

Utah. G. F. Knowlton (July 2): Only moderately abundant in early sweet corn examined at Willard. (July 6): Larvae had infested 35 percent of market sweet corn examined at Brigham. (July 26): Recently maturing sweet corn at Logan has been from 90- to 100-percent infested; that examined at Willard was from 75- to 85-percent infested.

Washington. L. G. Smith (July 3): Larvae have caused no serious damage, but they are attacking sweet corn in the Fruitvale and McKinley areas of Yakima County. Reported on June 27 that the eggs laid in and around tassels were hatching, and that some larvae were nearly full grown.

#### SWEETPOTATO

#### SWEETPOTATO LEAF BEETLE (Typophorus viridicyaneus Crotch)

Alabama. J. M. Robinson (July 16): Reported on cotton at Double Springs on June 27.

Mississippi. C. Lyle, et al. (July 25): Found in several sweetpotato fields in the northeastern part of the State.

TORTOISE BEETLES (Cassidinae)

Alabama. J. M. Robinson (July 16): Metritona bivittata Say reported on sweetpotatoes at Greenville on June 19. Coptocycla sp. reported on sweetpotatoes at Moulton on July 3.

Mississippi. C. Lyle, et al. (July 25): Specimens of M. bivittata from sweetpotatoes received from Forrest, Lee, Montgomery, and Yalobusha Counties. Reports of injury to sweetpotatoes by this or some other species of tortoise beetle received from Calhoun County, the Meridian area, and the northeastern part of the State. Specimens of Chelymorpha cassidea F. received the last week in June from Hinds County, where they were feeding on sweetpotatoes. Specimens of the mottled tortoise beetle (Chirida guttata Oliv.) from sweetpotato plants in Tippah County were received the first week in July.

SWEETPOTATO FLEA BEETLE (Chaetocnema confinis Crotch)

Mississippi. C. Lyle, et al. (July 25): Heavy infestation observed in a potato bed in Lamar County.

STRAWBERRY

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus L.)

Minnesota. M. W. Wing (July 15): Found in a house at Duluth.

Utah. G. F. Knowlton (July 2): Adults of this species and of B. rugosostriatus Goeze have practically all matured in northern Utah. Considerable control necessary during the last 2 weeks.

STRAWBERRY WEEVIL (Anthonomus signatus Say)

Wisconsin. E. L. Chambers (July 3): Severe damage caused in Jackson and Pierce Counties and vicinity; blossoms of plants cut off.

STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

Indiana. J. J. Davis (July 26): Reported as abundant in several localities late in June. In one instance, the observer reported them as going over to raspberries.

Minnesota. M. W. Wing (July 15): Present on strawberry at Rochester.

Nebraska. H. D. Tate (July 17): Plants showing damage were sent in on June 19 from Grant County.

Utah. G. F. Knowlton, et al. (July 6): Adults very abundant in one strawberry patch at North Logan, estimated average for the field being six per square foot. Unusually early for the second brood of adults to appear.



PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California. J. C. Elmore (July 15): Numerous in pepper fields in Los Angeles, Orange, and San Diego Counties. One small Bell pepper field near Huntington Beach, Orange County, was 100-percent infested. Two chili pepper fields in the same locality were heavily damaged. At San Luis Rey, San Diego County, a field of chili peppers was heavily infested on June 19. Practically all of the blossom buds and the pods on one edge of the field were infested. In Los Angeles County near Long Beach infested buds were found in 2 fields, before pods had begun to set, on June 20.

SUGAR BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Utah. G. F. Knowlton (July 1): Curly top is developing more generally in tomato and beet fields in northern Utah than was observed by the reporter at the same time during 1939. Counts in tomatoes at Hooper and Kaneshville ran from 10 to 28 percent; at Syracuse, from 6 to 18 percent; at Perry, from 10 to 34 percent; and at Spanish Fork, from 10 to 35 percent. (July 27): Approximately 60 percent of the tomato plants in Moab, Grand County, are affected by curly top, caused by this pest, which is abundant.

Nevada. G. G. Schweis (June 29): Reported as transmitting curly top to beets in the Lovelock area.

A CECIDOMYIID (Asphondylia sp.)

Arizona. V. E. Romney (May 10): Midge collected in the Salt River Valley. Found to develop in flowers of sugar beets, causing them to become **abnormal** in size and apparently destroying the germ in that part of the seed ball. (Det. by R. A. Cushman.)

HOPS

HOP APHID (Phorodon humuli Schr.)

Oregon. H. E. Morrison (June 24): Prospects of a severe infestation at Grants Pass and in the Willamette Valley.

COMMON RED SPIDER (Tetranychus telarius L.)

Oregon. H. E. Morrison (July 22): Average per leaf at Grants Pass is 200; at Eugene 50; and at Corvallis 500. Severe damage at Corvallis.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula F.)

Tennessee. L. B. Scott (July 19): Scarcer in north-central Tennessee than for many years. Moderate damage early in the season in an occasional plant bed, but present infestation hardly exceeds three per plant.

HORNWORMS (Protoparce spp.)

New York. N. Y. State Coll. Agr. News Letter (July 29): Tobacco worms are beginning to appear on tobacco in Onondaga County, western New York.

Virginia. W. J. Schoene (July 23): First-brood hornworms at Chatham reported as having disappeared from tobacco fields about July 19.

Tennessee. L. B. Scott (July 19): Larvae of P. quinquemaculata Haw. and P. sexta Johan. were very abundant for a short period early in June, causing severe damage to newly planted tobacco, in north-central Tennessee. Practically no larvae on tobacco for the last month. Traps have caught less than 10 percent of the number caught during the same period in 1939. Examination of 200 random plants in 10 fields today disclosed 1 egg and no larvae.

Kentucky. W. A. Price (July 25): Tobacco insects generally very scarce. Hornworms averaged about 1 per 300 plants in July. Counts were made at Lexington.

STALK BORER (Papaipema nebris nitela Guen.)

Massachusetts. A. I. Bourne (July 27): On July 8 an outbreak occurred in tobacco fields in Hadley, a town adjoining Amherst. Young plants, principally along the marginal rows were attacked by young larvae that were migrating from weeds along the edges of the fields. Most damage confined to the first two or three rows. Injury noticed in only one or two fields.

Alabama. J. M. Robinson (July 16): Reported on tomato at Brookside on June 10.

Indiana. J. J. Davis (July 26): Very abundant, especially in the northern half of the State. First reports received on June 26 and continuing to be received. In most instances the hosts reported have been oats, corn, and wheat, there being scattered reports of vegetable and flower crops.

TOBACCO BUDWORM (Heliothis virescens F.)

Florida. F. L. Chamberlin (July 18): Abundant throughout the season in Gadsden County. Tobacco tops and suckers heavily infested.



## COTTON INSECTS

### BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. Sherman, et al. (July 29): Below normal in most parts of the State.

F. F. Bondy, et al. (July 27): Still scarce in Florence County. Average infestation of all plots examined during the week was 1.7 percent as compared to 39.1 percent in 1938 and 68.9 percent in 1939.

Georgia. P. M. Gilmer, et al. (July 27): Numbers have not increased in Tift County as anticipated, although there is some rise. Few fields run over 10 percent, and many as low as 1 percent. Hot weather during the week caused some death of larvae in fallen squares, examination of some hundreds of squares giving about 30-percent average mortality, as compared with from 1 to 5 percent in previous weeks.

L. W. Morgan (July 26): No migrations have occurred in Lowndes and Echols Counties and the highest infestation for this week is 1.6 percent.

R. T. Harwell (July 26): Infestation has increased very rapidly during the week in Berrien and Cook Counties. Highest infestation was 16.17 percent, an increase of 4.67 percent since last week. The lowest infestation was 1.83 percent, an increase of 1.5 percent.

Florida. C. S. Rude, et al. (July 27): Infestation has increased rapidly during the last week, the average infestation being 8.06 percent last week and 7.75 percent this week. This apparent contradiction is due to the fact that the infestation in a few fields, very high a week ago, has been reduced by treatments. For the week ended July 30, 1938, the average infestation was 63.6 percent, and for the week ended July 29, 1939, it was 38.7 percent.

Alabama. J. M. Robinson (July 16): Infestation at Auburn is approximately 2 percent.

Mississippi. C. Lyle, et al. (July 29): Except in a few counties the infestation remains very low. Examinations on 77 farms in 33 counties showed only 47 infested, the average being 10 percent, as compared with 6 percent last week and 28 percent on this date in 1939. Five high infestations in Lauderdale and Wayne Counties accounted for the 10-percent average, and without these the average for the State was only 5 percent. Still very few weevils in the Delta, and almost none in the northern part of the State.

E. W. Dunnam, et al. (July 27): In Washington County 2,500 squares

were examined on 7 farms, infestation ranging from 0 to 8.5 percent of punctures, although only 1 weevil was found.

R. L. McGarr, et al. (July 27): Infestation continues very low in almost all fields in Oktibbeha and Lowndes Counties. An average of 5,700 squares examined this week in untreated fields and check plots of the experimental cuts showed an infestation of only 8.6 percent, as compared with 28.5 percent in 1939, and 34.5 percent in 1938 at this time. Average infestation for the previous week was 7.4 percent.

Louisiana. I. J. Becnel (July 25): Occurrence in large numbers is rather late. Population is increasing rapidly, and control measures being applied now.

R. C. Gaines, et al. (July 27): During the week 13,300 squares were examined in untreated plots in Madison Parish, averaging 16.6 percent punctured squares. On July 10 at 13 points 4 weevils were taken in 1,300 sweeps, and on July 26 at 16 points 20 were taken in 1,600 sweeps.

Texas. F. L. Thomas (July 23): More damage being caused now than by any other cotton insect. During the last week examinations were made in south-central, north-central, northern, and northeastern Texas. Damage was being caused on 15 of 21 farms examined in south-central Texas, the average infestation running highest in Lee, Milam, Bastrop, Fayette, and Washington Counties. In north-central Texas weevils had been injurious on 12 of 35 farms examined. Control particularly needed in McLennan, Limestone, and Falls Counties. Some injury being caused in Dallas and Fannin Counties, northern Texas. (July 30): In Kaufman County activity was confined mostly to the bottom lands, where from 8 to 48 percent of the squares were found punctured. Examinations in north-central and south-central Texas during the last week showed damage on 8 of 12 farms examined. In bottom-land fields in Brazos and Burleson Counties the infestation was found to range from 2 to 50 percent of punctured squares.

R.E. McDonald (July 1): Damage in the lower Rio Grande Valley has increased enormously. In fields where only occasional damaged squares could be found 2 weeks ago, the entire top crop has now been lost.

K. P. Ewing, et al. (July 27): In McLennan County 4,300 squares were examined in 7 fields, with an average infestation of 15.8 percent of punctured squares. At Mexia 1,800 squares were examined in 3 fields (check plots), averaging 56.3 percent punctured squares. At Riesel 3,600 squares were examined, averaging 6.5 percent punctured squares, as compared with 5.3 punctures per 100 squares for last week.



C. R. Parencia, et al. (July 13): In the control plats in Calhoun County infestation records showed that 60 of the 6,000 squares examined were punctured. In the field 13,200 squares were examined and 0.5 percent were found to have been punctured.

Cuba. W. E. Conn (July 9): Dobryard cotton plants found infested in a number of places about 6 miles south of Cardenas; similar plants found heavily infested in localities 2, 4, and 12 miles south of Esperanza, which is about 6 to 8 miles west of Santa Clara. Infestation found about midway between Cardenas and Santa Clara.

BOLLWORM (Heliothis armigera Hbn.)

South Carolina. F. F. Bondy, et al. (July 27): Some seen feeding on squares in Florence County, and considerable injury found in one field.

Georgia. P. M. Gilmer, et al. (July 27): Very little damage apparent in Tift County, even near maturing corn.

Florida. C. S. Rude, et al. (July 27): Numerous in most cottonfields in Florida.

Mississippi. C. Lyle, et al. (July 25): Reported as generally present on cotton in the Grenada area, and as present in all cottonfields in the northwestern counties. Also causing light damage in the Meridian area; observed in Leake County; and causing some injury in the vicinity of State College.

E. W. Dunnam, et al. (July 27): A few can be located in Washington County, but they are decreasing in numbers.

R. L. McGarr, et al. (July 27): A little damage noted in a few cottonfields in Oktibbeha and Lowndes Counties.

Texas. F. L. Thomas (July 23): Threatening in a few fields of Burleson, Washington, Ellis, Hill, and Bell Counties. (July 30): An average of 5 percent of the squares was found to be injured in 24 fields examined in Hill, Ellis, McLennan, Falls, and Robertson Counties. Only scattered eggs found in most fields. Injury noticeable in most fields in the bottom lands of Brazos and Burleson Counties, in some instances amounting to an average of 15 percent of the forms.

C. R. Parencia, et al. (July 20): Damage very light in Calhoun County.

Cuba. W. E. Conn (July 9): Two infestations discovered on wild cotton, one 50 miles west of Havana, and the other 100 miles east of Havana.

COTTON LEAF WORM (Alabama argillacea Hbn.)

Florida. C. S. Rude, et al. (July 6): Found in another field near Newberry, Alachua County, bringing the total to 5 fields in which they have been observed, spread over an area of about 12 miles in width. Found in comparatively small numbers. (July 13): Observed in fields near Trenton, Gilchrist County, Newberry, and also near Wiersdale, in southern Marion County. First- and second-instar larvae observed. In the field where the heaviest infestation was observed all the larvae had pupated. Counts in this field showed an average of less than 100 larvae per acre. In no fields were they numerous enough to be doing damage. (July 20): The third brood began to emerge during the week. Observed in fields in Alachua, Gilchrist, and Marion Counties. Numerous enough to damage cotton in only a few fields. Infested region gradually enlarging. (July 27): Pupation has begun in most fields. A few moths observed.

Texas. F. L. Thomas (July 9): No reports received north of San Patricio County, in the coastal bend area. (July 16): Infestation appearing in the lower valley in May failed to become an important source for later spread.

R. E. McDonald (July 1): Some damage to cotton reported in parts of Nueces County.

PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. R. E. McDonald (July 15): Examination of 650 preserved green bolls from the lightly infested area adjoining the heavily infested area in Hudspeth County yielded 44 larvae.

A. J. Chapman (July 27): In 12 identical fields in Presidio County, in which 5 counts were made at 3-day intervals, the records show an increase in the infestation over that of last year.

Cuba. W. E. Conn (July 9): On July 7 scouting was started near Cardenas. Six dooryard plants of wild cotton were found to have a considerable number of dry bolls, which were practically 100-percent infested. From four to six larvae in some of the bolls, and many had pupated. Plants stated to have sprung up within the last 3 years, since the land was cleared. About 1 and 1/3 miles away a number of small plants of Sea Island cotton were found, which were infested, but not so heavily as the first. It was common to find several larvae in a boll. All findings within about 1 mile of the seacoast, and from 6 to 8 miles west of Cardenas.

R. E. McDonald (July 15): On July 2, 3 specimens of the pink bollworm were taken from 50 bolls collected from wild-cotton dooryard plants at San Cristobal, about 50 miles west of Havana. Also found at Cardenas. These 2 infestations are approximately 150 miles apart, one being about 50 miles west and the other 100 miles east of Havana.



COTTON FLEA HOPPER (Psallus seriatus Reut.)

South Carolina. F. F. Bondy, et al. (July 27): A few seen during the week in Florence County, but no damage done.

Alabama. J. M. Robinson (July 16): Few observed.

Mississippi. C. Lyle (July 25): Signs of injury reported from different places in the Durant area.

E. W. Dunnam, et al. (July 27): Not abundant, but can be found in some fields in Washington County.

R. L. McGarr, et al. (July 27): Very few noted in cotton this week in Oktibbeha and Lowndes Counties.

Louisiana. I. J. Bécnel (July 25): Cotton damaged over a considerable area of northwestern Louisiana during the last 6 or 8 weeks. Infestations have become reduced, and damage now generally small. However, some damage is still evident in localized areas.

R. C. Gaines, et al. (July 27): On July 16 at 16 points in Madison Parish, 3 adults were taken in 1,600 sweeps. None taken on July 10 and 26.

Texas. F. L. Thomas (July 23): Injurious on about 50 percent of the farms in northern Texas and on one-third of the farms examined in north-central Texas. Most abundant in Kaufman and Fannin Counties, but also causing some damage in Bell, Falls, Ellis, and McLennan Counties. (July 30): Reductions in infestations noted in northern Texas. In Kaufman County the hot weather, accompanied by strong winds, tended to harden the cotton, thus causing reductions in the infestations. In the 20 fields examined an average of 28 was found on 100 terminal buds.

K. P. Ewing, et al. (July 27) Examinations in 5 fields around Waco, McLennan County, showed an average of 19.8 flea hoppers per 100 terminals, as compared with an average of 24.1 per 100 terminals last week. At Riesel the average was 18.7 per 100 terminals, as compared with 18.4 last week.

C. R. Parencia, et al. (July 13): Infestations continued to decrease in Calhoun County.

Arizona. W. A. Stevenson (July 20): Sweepings made on croton in Pima County showed a maximum of 188 flea hoppers per 100 sweeps.

APHIDS (Aphidae)

South Carolina. F. F. Bondy, et al. (July 27): Fairly numerous in untreated cotton in Florence County, and increasing in some treated plots. Parasites and predators numerous.

Georgia. P. M. Gilmer, et al. (July 27): Apparently few mature aphids, usually only one or two per leaf affected, but considerable numbers of nymphs. Parasites normally abundant.

L. W. Morgan (July 12): Light infestation in all fields in Lowndes and Echols Counties.

Florida. C. S. Rude, et al. (July 6): Observed in large numbers in one field in Alachua County. (July 20): Numerous in two or three fields in Lake County that have been treated.

Tennessee. G. M. Bentley (July 6): Large numbers of aphids are occurring on cotton in the western counties of Tennessee. Great numbers of ladybeetles feeding on them.

Mississippi. C. Lyle, et al. (July 25): Light infestations of Aphis gossypii Glov. reported from Hinds County and from the Grenada and Meridian areas.

E. W. Dunnam, et al. (July 27): Slowly building up in most fields in Washington County, but can be found only by close observation.

R. L. McGarr, et al. (July 27): A few noted in some of the cotton-fields examined during the week in Oktibbeha and Lowndes Counties.

Louisiana. I. J. Becnel (July 25): Early heavy infestation caused serious damage to seedling cotton. Many plants have overcome the effects, but have been delayed considerably.

R. C. Gaines (July 27): Some increase in both treated and untreated cotton in Madison Parish, but not very numerous.

Arkansas. D. Isely (July 23): A. gossypii is unusually abundant for midsummer

Texas. K. P. Ewing, et al. (July 27): At Riesel, McLennan County, 3,600 square inches of leaf surface were examined, averaging 0.17 aphid per square inch, as compared with 0.07 for last week. In the experimental plots at Waco 1,600 square inches of leaf surface averaged 0.22 aphid per square inch.

Arizona. W. A. Stevenson (July 13): An infestation of A. gossypii on cotton in Pima County was investigated on July 9. Rather heavy, spotted infestation found, considerable dwarfing of the plants having been caused. Parasites had the infestation well under control, aphids on some of the leaves examined being practically 100-percent parasitized.

#### WHITEFLIES (Aleyrodidae)

Mississippi. E. W. Dunnam, et al. (July 27): Increasing in practically all fields in Washington County, where they seem to be causing some shedding of small squares. Extremely small squares are drying up in some places where they are plentiful on the tender leaves.



F O R E S T   A N D   S H A D E   -   T R E E   I N S E C T S

PERIODICAL CICADA (Magicicada septendecim L.)

Delaware. L. A. Stearns (July 16): Cicada cases rather common on trunks of apple trees in planting adjoining woodland at Chéswood.

Alabama. W. F. Turner (June 28): Noted in two counties in northeastern Alabama this week. On June 27 comparatively small population noted along a highway in Etowah County. Present in oak woods growing up the side of Sand Mountain. Another small colony noted in oaks growing near Woodville, in Jackson County.

Tennessee. S. A. Rohwer (June 11): Seen and heard in area between Knoxville and Norris Dam on June 11.

FALL WEBWORMS (Hyphantria spp.)

New England. E. P. Felt (July 24): Becoming abundant throughout a large area in southeastern New York and southwestern New England and may develop in larger numbers than in 1939.

Vermont. H. L. Bailey (July 29): More than usually abundant in Washington County, central Vermont.

Connecticut. P. Wallace (July 24): Heavy infestation in lower Fairfield and Litchfield Counties.

Virginia. A. M. Woodside (July 20): More apparent during the last month on apple, plum, and other fruits.

General. T. Thompson (July 14): Observed on roadside trees in northern Florida, southern Georgia, and generally over a large part of Alabama and Mississippi. Unusually severe.

Georgia. T. L. Bissell (July 12): Unusually common on pecan and hickory at Experiment this summer. They have been observed since June 21.

O. I. Snapp (July 8): Fall webworms appear to be more abundant than usual on persimmon at Fort Valley, central Georgia.

Tennessee. G. M. Bentley (July 24): Fall webworm generally abundant over the State. Hosts are a large number of trees and shrubs, primarily sycamore, elm, maple, wild cherry, sumac, and ligustrum.

Indiana. J. J. Davis (July 24): Heaviest infestation in many years over nearly all parts of the State, and severe damage done in some cases. First generation is about ready to leave the webs for pupation.

FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Vermont and Massachusetts. J. V. Schaffner, Jr. (July 11): Outbreak of this caterpillar, which has been rampant throughout the southern half of Vermont and western part of Massachusetts since 1935, has now subsided. Caterpillars and cocoons collected in some localities early in July, but feeding has been very light and infestations extremely local.

New York. J. V. Schaffner, Jr. (July 19): Several areas of woodland, ranging from 5 to 100 acres in size, and a number of maple groves, all 75 to 90 percent defoliated, were reported in Madison, Chenango, Otsego, Delaware, and Broome Counties.

E. P. Felt (July 24): Sarcophaga aldrichi Parker, a parasite of the forest tent caterpillar, was so abundant at Lew Beech and Livingstone Manor in July as to be a nuisance to people in the vicinity.

Colorado. G. M. List (July 23): More numerous in Fort Collins than for several seasons. In some instances shade trees have been injured.

Oregon. S. M. Dohanian (June): Heavy parasitization in the forest tent caterpillars, which are widely prevalent in the Willamette Valley.

GYPSY MOTH (Porthetria dispar L.)

New Hampshire. J. G. Conklin (July 26): Unusually abundant and many acres of woodland have been defoliated. During July the wilt disease developed rapidly.

Vermont. A. F. Burgess (July 6): Severe defoliation noticed in Westminster, Rockingham, and Springfield.

Massachusetts. A. F. Burgess (July 19): Defoliation has been reported from several locations in the central and eastern parts of the State, especially in the Concord-Lincoln-Sudbury region and in Groton and Westford, with a small amount in Andover. Severe defoliation reported just north of Fall River.

SATIN MOTH (Stilpnotia salicis L.)

Oregon. S. M. Dohanian (June): A recent survey in the Willamette Valley shows that this has not proved to be of economic importance. Reported that the heavy infestation, which 3 years ago completely defoliated silver poplars at Rickreall, has been controlled by parasites, and this year shows no damage whatever. Other heavy infestation areas of recent years also show a good control by parasites.



ELM SPANWORM (Ennomos subsignarius Hbn.)

Massachusetts (July 6): One-hundred-percent defoliation of maple, elm, and other trees reported on an area of about  $\frac{1}{2}$  square mile in a maple swamp at Wenham.

TUSsock MOTHS (Hemerocampa spp.)

New York. E. P. Felt (July 24): H. vetusta Bdv. sufficiently numerous to attract notice in vicinity of Syracuse.

Ohio. J. S. Houser (July 3): An American larch tree, 50 feet tall, at Londonville, is heavily infested with H. leucostigma A. & S. larvae about two-thirds grown. Tree completely defoliated last year. Generally more abundant than for several seasons.

BAGWORM (Thyridopteryx ephemeræformis Haw.)

Maryland. E. N. Cory (July 25): Attacking evergreens generally.

Virginia. M. M. Duncan (July 25): Attacked arborvitæ and other shade trees quite severely in section of Chilhowie, Smyth County. Writer believes this is first time that bagworm was found here. First noticed on July 1.

Tennessee. G. M. Bentley (July 14): Occurring in less numbers than for several years.

Mississippi. C. Lyle, et al. (July 25): Specimens received from Bolivar, Chickasaw, Harrison, Lafayette, Newton, and Yazoo Counties, where they were said to be feeding on arborvitæ, evergreens, and shrubs. Heavy infestations were reported from Holmes, Hinds, and Tate Counties, and in the Meridian and Grenada districts.

Illinois. W. P. Flint (July 26): Infestation, which was greatly reduced in winter of 1935-36, is now reappearing with many scattered and rather severe infestations in the central and south-central parts of the State.

Oklahoma. F. E. Whitehead (July 25): Reported on cedar at Miami.

A CHRYSOMELID (Anticus laticlavus Forst.)

Alabama. J. M. Robinson (July 16): Reported on persimmon at Geneva on July 1.

A WHITEFLY (Trialeurodes wellmani Bemis)

California. R. H. Smith (July 17): Quite serious on Rhamnus californica in vicinity of Santa Barbara. Many plants heavily infested. (Det. by Louise M. Russell.)

BEECH

A GALL INSECT (Coccidomyia pudibunda O. S.)

Delaware. E. P. Felt (July 24): Found in abundance on blue-beech foliage near Wilmington.

BOXELDER

BOXELDER APHID (Periphyllus negundinis Thos.)

Utah. G. F. Knowlton (July 16): Damaging boxelder foliage in Logan Canyon.

G. F. Knowlton and F. C. Harmston (July 18): Abundant on boxelder foliage and annoying around Vernal and Maeser, in the Uintah Basin.

CAMPHOR

CAMPHOR THRIPS (Liothrips floridensis Watson)

Florida. J. R. Watson (July 22): Specimens sent in from several counties where damage has been severe.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Bdv.)

Ohio. E. W. Mendenhall (June 27): Severely damaging catalpa trees in Franklin County.

Indiana. J. J. Davis (July 26): Larvae noticeable in all parts of the State, and in many places trees were practically defoliated.

Michigan. R. Hutson (July 24): Specimen sent in from Edwardsburg.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

New England. R. B. Friend (August 5): Throughout the State of Connecticut this pest has caused very severe injury to unsprayed trees, and I noticed last week end, going from northeastern Connecticut to Boston through northern Rhode Island and parts of Massachusetts, that the damage was very striking. The writer has never before observed injury so severe. Many trees are completely defoliated. This injury has become striking during the last two or three weeks.

New Hampshire. J. G. Conklin (July 26): Locally abundant at Durham but infestations quite spotted.



- Massachusetts. J. V. Schaffner, Jr. (July 21): Injury very noticeable in many localities in Middlesex and Worcester Counties. Outbreaks seem to be extremely local. Injury observed in Holliston, Milford, Hopedale, and Uxbridge.
- Rhode Island. A. E. Stone (July 26): Wintered over in large numbers and more abundant than in any recent year.
- New York. R. E. Horsey (July): Found in numbers on an elm, the larvae being from  $2/8$  to  $5/8$  inch in length on July 10.
- New Jersey. C. W. Collins (July 17): First pupa of season found at Pluckemin, Somerset County, on July 10. Other stages, including adults that overwintered, noted elsewhere on the same date.
- Virginia. A. M. Woodside (July 20): Fairly common and causing moderate damage to many small elms, particularly Chinese elm, planted along the highways in Augusta County.
- Ohio. E. W. Mendenhall (June 25): Found slightly damaging elms in Kirkersville, Licking County.
- Utah. G. F. Knowlton (June 28): Seriously damaging foliage of several elms at Smithfield.

NATIVE ELM BARK BEETLE (Hylurgopinus rufipes Eich.)

- New Hampshire and Vermont. E. P. Felt (July 24): Extremely abundant in parts of the Connecticut River Valley in southern New Hampshire and Vermont, evidently having bred in large numbers from trees blown down or severely damaged by the hurricane of 1938. Large numbers attacked elms in many localities in this region, causing dying back of good-sized branches and in a few cases the death of a considerable proportion of even large trees.
- Vermont. H. L. Bailey (July 29): Elm found seriously attacked in Bradford, Orange County, east-central Vermont. Hurricane-felled elm had been left nearby.

MOORING CLOAK BUTTERFLY (Hamadryas antiopa L.)

- Minnesota. M. W. Wing (July 15): Present on caragana at Ivanhoe.
- Iowa. C. J. Drake (June 28): Found in large numbers on elms in Atlantic.
- South Dakota. H. C. Severin (July 26): Considerably damaging elms and willows in the eastern part of the State.

ELM SAWFLY (Cimbex americana Leach)

- Wisconsin. E. L. Chambers (July 30): Elms and willows in many sections of southern Wisconsin are being stripped.
- Oklahoma. F. E. Whitehead (July 25): Larvae reported on trees at Wagoner.

A CECIDOMYIID (Oligarces ulmi Felt)

Texas. R. K. Fletcher (July 22): Severely damaging twigs of cedar elm in Bell and McLennan Counties on June 14, and in Bastrop County on June 17.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

New Hampshire. J. G. Conklin (July 26): Specimens on American elm received from Nashua, in the southeastern part of the State.

Connecticut. E. P. Felt (July 24): Found in abundance on an elm at West Hartford.

New York. R. E. Horsey (July): Fairly common on elms at Rochester in July.

Wisconsin. E. L. Chambers (July 3): Reports of infestation received from Fond du Lac and Oshkosh.

Utah. G. F. Knowlton (July 15): Damaging young elms at Logan and Brigham.

Idaho. H. C. Hallock (July 8): Complaints of injury received from residents of Twin Falls.

Washington. L. G. Smith (July 10): Specimens sent in on June 7. Attacking elm in vicinity of Pomeroy, Garfield County.

WOOLLY ELM APHID (Eriosoma americanum Riley)

Nebraska. H. D. Tate (July 17): Specimens received from Madison County on July 10.

Oregon. E. J. Haller (June 15): Very abundant since May 28 on elms at Corvallis, 20 percent of the leaves on some trees being infested. Causing no damage except deformation and discoloration of leaves. (Det. by A. N. Tissot.)

HICKORY

HICKORY PHYLLOXERA (Phylloxera caryaecaulis Fitch)

Connecticut. E. P. Felt (July 24): Occurs in large numbers on some trees at Bristol.

LARCH

LARCH CASEBEARER (Coleophora laricella Hbn.)

New England. J. V. Schaffner, Jr. (July 11): Casual observations made through Connecticut, Massachusetts, southern half of Vermont, and southern part of New Hampshire indicate that infestations are generally light. One small area of larch in Lee, Mass., was severely defoliated.



LOCUST

LOCUST LEAF MINER (Chalepus dorsalis Thunb.)

Maryland. E. N. Cory (July 20): Attacking locust leaves at Prince Frederick, Calvert County.

Virginia. A. M. Woodside (July 20): Damage to foliage of black locust becoming more apparent. Trees in many localities in Augusta County appear scorched.

North Carolina. B. H. Wilford (July 8): Damage to black locust in mountains of western North Carolina is apparently much less serious than it has been in the last 2 or 3 years.

Tennessee. G. M. Bentley (July 15): Reported as found in large numbers on black locust in a park in Memphis.

B. H. Wilford (July 8): Damage to black locust in the mountains of eastern Tennessee apparently much less serious than in the last 2 or 3 years.

Ohio. R. H. Nelson (July 18): Severely injuring black locust along the Ohio River in Lawrence County. Adults numerous on July 18. Moderate infestation found on rose-acacia at Burlington.

A GALL MIDGE (Dasynoura gleditshiae O. S.)

New York. E. P. Felt (July 24): Somewhat abundant on trees in environs of New York City, a considerable proportion of the leaflets being deformed.

MAPLE

WOOLLY ALDER APHID (Prociphilus tessellatus Fitch)

Vermont. H. L. Bailey (July 29): Unusual number of reports from Washington County, central Vermont. Apparently plentiful on silver maples as late as July 22.

Maryland. E. N. Cory (July 1): Attacking maple in Baltimore and in Prince Georges and Saint Marys Counties.

District of Columbia. L. G. Baumhofer (July 15): Numerous calls and specimens received during June and the early part of July indicate that this pest was more abundant than usual in Washington and vicinity.

MAPLE BLADDER GALL (Phyllocoptes quadripes Shim.)

District of Columbia. L. G. Baumhofer (July 22): Numerous inquiries received June and early July regarding cause of these galls, which were apparently rather common on silver maple in certain sections of Washington and vicinity.

Michigan. R. Hutson (July 24): Common on soft maple at Pontiac, Dearborn, Ann Arbor, East Lansing, and Grand Rapids.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

New York. E. P. Felt (July 24): Found in considerable numbers on yew at Oyster Bay.

Ohio. T. H. Parks (July 24): Specimens received from Mount Victor, Hardin County, and from Urbana, Champaign County, with statement that maple trees were seriously infested early in July.

Wisconsin. E. L. Chambers (July 30): Abundant on soft maple in Dodge and Jefferson Counties.

Idaho. H. C. Hallock (July 8): Noted attacking Virginia creeper in Twin Falls and very common on maple and other trees in the area.

OAK

TWIG PRUNER (Hypermallus villosus F.)

New Hampshire. J. G. Conklin (July 26): Unusually abundant in southeastern part of the State, particularly on oak.

Minnesota. M. W. Wing (July 15): Very abundant on oak at Farmington, Red Wing, Saint Anthony Park, Saint Paul, and Minneapolis.

A TORTRICID (Argyrotoxa semipurpurana Kearf.)

Connecticut. J. V. Schaffner, Jr. (June 25): Scarlet oak trees in mixed stand of hardwoods on an area of about 5 acres in Wallingford were about 75-percent defoliated early in June. A few white oak trees were also partially defoliated.

A JUMPING GALL (Neuroterus saltatorius Hy. Edw.)

California. D. F. Barnes and G. H. Kaloostian (July 15): Specimens received. Evident that large numbers are now dropping from leaves of the valley oak (Quercus lobata) in Fresno.

A LACEBUG (Corythucha arcuata Say)

New Jersey. M. D. Leonard (July 25): Found attacking white oak at Ridgewood. Most of the leaves so infested that the foliage had assumed a general grayish cast. (Det. by H. G. Barber.)

GIANT APHID (Longistigna caryae Harr.)

Tennessee. G. M. Bentley (July 6): Reported as damaging pin oak at Etowah, McMinn County.



PINE

PALES WEEVIL (Hyllobius pales Hbst.)

Kentucky. W. A. Price (July 25): Received from London with statement that beetles were injuring white pine seedlings.

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

New England. E. P. Felt (July 24): Increasing in abundance in southwestern New England and southeastern New York.

New Jersey. T. H. Jones (July 15): Noted causing severe injury in red pine plantings in vicinity of Chester and New Vernon.

Michigan. R. Hutson (July 24): In flight at Saint Joseph from July 12 to 25.

PITCH TWIG MOTH (Petrova comstockiana Fern.)

Alabama. J. M. Robinson (July 16): Reported on pine at Tuscaloosa on July 9.

RED-HEADED PINE SAWFLY (Neodiprion lecontei Fitch)

Georgia. O. I. Snapp (July 20): Larvae very abundant on a planting of ornamental long-leaf pine trees at Fort Valley, central Georgia; completely defoliated several trees.

Mississippi. C. Lyle (July 25): Received from Pontotoc County, where they were feeding on pine in a forest.

A PINE SAWFLY (Acantholyda erythrocephala L.)

New Jersey. C. L. Griswold (July 19): Larvae found feeding on white pine at Radnor, Delaware County.

PINE BARK APHID (Pineus strobi Htg.)

New York. E. P. Felt (July 24): Abundant on a group of white pines at Oyster Bay. Also numerous here and there in a considerable area centering on New York City.

Minnesota. M. W. Wing (July 15): Present on white pine at Winona.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Massachusetts. E. P. Felt (July 24): Reported from Greenfield.

New Jersey. E. P. Felt (July 24): Reported as somewhat abundant from the region about Orange.

Alabama. J. M. Robinson (July 16): Reported on pine at Tuscaloosa on July 9.

Minnesota. M. W. Wing (July 15): Moderately abundant on white spruce.

Nebraska. H. D. Tate (July 17): Heavily infested pine foliage received on July 5 from Sheridan County.

PINE SPITTLE BUG (Aphrophora parallela Say)

Wisconsin. E. L. Chambers (July 30): Very common on all species of pine in southern Wisconsin and causing damage to twigs on Scotch and red pine in Columbia and Wood Counties.

POPLAR

POPLAR TENT MAKER (Ichthyura inclusa Hbn.)

Kentucky. W. A. Price (July 25): Received from Brandenburg where it is troublesome.

A PYRALID (Euzophora ostricolorella Hulst)

Maryland. E. N. Cory (July 8): Attacking tulip poplar in Baltimore County. (Det. by C. Heinrich.)

A LEAF MINER (Phyllocnistis populiella Chamb.)

Wyoming. J. C. Evenden (July 23): Infestation by the aspen leaf miner is very severe on Populus tremuloides at Jackson, the injury being extended to practically every leaf.

A SAWFLY (Pteronus hudsonii Dyar)

New York. R. E. Horsey (July 24): Seven larvae found on a cottonwood leaf edge, little damage having been done to a few poplar leaves at Rochester.

REDBUD

REDBUD APHID (Aphis pawneeae Hottes)

Tennessee. W. F. Turner (May 17): Collected on an ornamental redbud at East Chattanooga. (Det. by P. W. Mason.)

SPRUCE

SPRUCE SAWFLY (Neodiprion abietis Harr.)

Maine. E. P. Folt (July 24): Caused serious injury at Bar Harbor.

SPRUCE BUD SCALE (Physokermes piceae Schr.)

Ohio. J. S. Houser (July 8): Infestation on Norway spruce at Youngstown sufficient to cause specific damage. Young are beginning to appear.



AN APHID (Cinara glehna Essig)

District of Columbia. L. G. Baunhofer (May 16): Aphids collected from spruce twigs at Washington. Found clustered on bark of twig between needles. No winged forms present. (Det. by P. W. Mason.)

SPRUCE MITE (Paratetranychus uniunguis Jacobi)

Minnesota. M. W. Wing (July 15): Reported as very abundant on spruce at Clarkfield, Frazee, Saint Paul, Pipeston, and Albert Lea, and on white and red spruce at Minneapolis.

TAMARACK

EASTERN LARCH BEETLE (Dendroctonus simplex Lec.)

Minnesota. W. M. Wing (July 15): Present on tamarack at Marino on Saint Croix.

WALNUT

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Tennessee. G. M. Bentley (July 20): Damaging walnut trees in vicinity of Lawrenceburg.

Mississippi. C. Lyle, et al. (July 25): Reported as feeding on pecan in one locality in Tate County.

Missouri. L. Haseman (July 23): In central Missouri since the middle of July a few colonies found working on hickory and walnut. Most of these are in the fourth and fifth instars.

WILLOW

COTTONWOOD LEAF BEETLE (Chrysomela scripta F.)

Louisiana. T. E. Snyder (July 13): Beetles and larvae from New Orleans. (Det. by W. H. Anderson.)

Ohio. E. W. Mendenhall (June 25): Found doing damage to willows in Kirkersville Licking County.

North Dakota. J. A. Munro (July 21): Distributed and moderately abundant particularly in young cottonwood plantings.

SPOTTED WILLOW LEAF BEETLE (Chrysomela lapponica L.)

South Dakota. H. C. Severin (July 26): Defoliating willows in the south-central part of State.

POPLAR AND WILLOW BORER (Sternochetus lapathi L.)

Michigan. R. Hutson (July 24): Reported from Lansing, Detroit, and Portland.

Minnesota. M. W. Wing (July 15): Present on willow at Milaca.

Oregon. J. Schuh (June 24): First adult observed on June 19 at Portland.  
Many pupae. Severe damage to willows and poplars in certain localities.

CORRECTION: Note on S. lapathi published in the Insect Pest Survey Bulletin, dated July 1, 1939, (p. 337), refers to some leaf-feeding beetle, and not to S. lapathi.

EUROPEAN WILLOW LEAF BEETLE (Plagiodera versicolora Laich.)

Pennsylvania. L. G. Baumhofer (July 18): Adults feeding on willow at Mount Lebanon, a suburb of Pittsburgh. This is farther west than the beetle has previously been recorded. (Det. by H. S. Barber.)

AN APHID (Chaitophorus vininalis Monell)

New Jersey. M. D. Leonard (July 25): Infestation on large willow at Ridgewood has been building up, until now almost every leaf is heavily infested.



INSECTS AFFECTING GREENHOUSE  
AND ORNAMENTAL PLANTS

THREE-LINED POTATO BEETLE (Lema trilineata Oliv.)

Minnesota. M. W. Wing (July 15): Moderately abundant on Japanese lantern at Saint Anthony Park and Polisan Rapids.

A GEOMETRID (Coryvasta meadii Pack.)

Ohio. C. R. Neiswander (July 24): Causing appreciable injury to barberry at Wooster and in certain other localities in Ohio. (Det. by H. W. Capps.)

A MIRID (Sixenotus areolatus Knight)

Texas. R. K. Fletcher (July 22): Causing very severe injury to gaillardia on June 22.

HAIRY CHINCH BUG (Blissus hirtus Montd.)

Connecticut. J. P. Johnson (July 22): Two to three weeks later than last year, infestations in lawns in New Haven and Westport being considerably below those of 1939, owing to weather conditions. Appeared in great numbers in several parts of Hartford, causing severe damage.

New York. N. Y. State Coll. Agr. News Letter (July 8): Considerable damage is being done to lawns and golf courses in Westchester County.

A LACEBUG (Piesma cinerea Say)

South Dakota. H. C. Severin (July 26): Doing considerable damage to garden plants in many areas of the State.

MEALY FLATA (Ornania pruinosa Say)

New Jersey. M. D. Leonard (July 25): Nymphs infesting a number of new shoots on a good-sized barberry hedge at Ridgewood.

AN APHID (Capitophorus gillettei Theob.)

New York. M. D. Leonard (July 27): Every leaf on two dozen large smartweed plants grown in pots at Flushing infested. Considerable honeydew on leaves. Plants infested last year but not nearly so heavily.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

Connecticut. E. P. Felt (July 24): Found abundant on boxwood at Stamford; also on yellowwood.

Minnesota. M. W. Wing (July 15): Scarce on apple at Farmington.

South Dakota. H. C. Severin (July 26): Causing more and more trouble each year, especially on apple, currant, lilac, and buckthorn hedge plants.

ARBORVITAE

A LEAF MINER (Recurvaria thujaella Kearf.)

Delaware. C. W. Collins (June 29): Feeding on arborvitae at Lewes on June 5.  
(Det. by C. Heinrich.)

ARBORVITAE LEAF MINER (Argyresthia thuiella Pack.)

Tennessee. G. M. Bentley (July 26): Injuring arborvitae in Sullivan and Washington Counties.

AZALEA

A THRIPS (Heterothrips azaleae Hood)

Maryland. G. V. Johnson (June 6): Infesting blooms of azalea at Beltsville on June 4. (Det. by J. C. Crawford.)

CHRYSANTHEMUM

CHRYSANTHEMUM LACEBUG (Corythucha marmorata Uhl.)

Ohio. T. H. Parks (July 24): Injured leaves received on July 15 from Warren, Trumbull County, in eastern Ohio.

CHRYSANTHEMUM APHID (Macrosiphoniella sanborni Gill.)

New Jersey. M. D. Leonard (July 25): Very few on the tender terminal leaves of a number of chrysanthemum plants under observation all season at Ridgewood.

District of Columbia. H. Sollers (June 22): Found on chrysanthemum where they were being eaten by ladybeetle larvae. (Det. by P. W. Mason.)

COLUMBINE

COLUMBINE LEAF MINER (Phytomyza minuscula Gour.)

New Jersey. M. D. Leonard (July 25): Infesting several columbina plants under observation at Ridgewood; almost every leaf is badly mined.

Tennessee. G. M. Bentley (June 28): Causing injury to columbine at Grayville, Rhea County.



AN APHID (Pergandeidia trirhoda Walk.)

New Jersey (July 25): Considerable infestation on several columbine plants at Ridgewood.

DOGWOOD

A CERAMBYCID (Oberea tripunctata Swed.)

Maryland. E. N. Cory (July 16): Larva collected from dogwood at Berwyn.  
(Det. by W. H. Anderson.)

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

Georgia. T. L. Bissell (July 15): Old hedge at Griffin severely infested in spots. Large branches were killed.

Mississippi. C. Lyle (July 25): Specimens from euonymus plants received from Chickasaw County.

Texas. R. K. Fletcher (July 22): Very heavy infestation on euonymus in Rusk County on July 17.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips simplex Merison)

Georgia. T. L. Bissell (July 22): Gladiolus blossoms in a garden at Experiment ruined.

Mississippi. C. Lyle (July 25): Specimens received from Jackson County with reports of serious injury to one planting.

Wisconsin. E. L. Chambers (July 30): Very abundant on late gladiolus in Jefferson, Dodge, Milwaukee, and Ozaukee Counties.

Washington. C. F. Doucette (July 16): Gladiolus plants, about 18 to 24 inches high, severely injured, when observed on July 7 in Tacoma. Many adults and larvae present.

IVY

A SCALE (Chrysomphalus bifasciculatus Ferris)

New Jersey. E. P. Felt (July 24): Occurred in considerable numbers on ivy growing indoors in the vicinity of Orange.

LILY

APHIDS (Aphidae)

Washington. C. F. Doucette (May 17): Myzus convolvuli Kltb. found sparsely scattered in terminals of various lilies at Sumner. (Det. by P. W. Mason.)

Oregon. C. F. Doucette (May 12): Aphis gossypii Glov. present on lily plants in a nursery at Dillard. (May 13): Aphids found on lilies at Harbor included M. circumflexus Buckt., A. gossypii, and M. convolvuli. (May 14): At Charleston one specimen of M. circumflexus was collected on lily, and M. convolvuli was moderately abundant. (Det. by P. W. Mason.)

MAGNOLIA

TULIPTREE SCALE (Toumeyella liriodendri Gmel.)

Texas. R. K. Fletcher (July 8): Collected from pink magnolia at Beaumont. (Det. by H. Morrison.)

PHLOX

PHLOX PLANT BUG (Lopidea davisii Knight)

Indiana. J. J. Davis (July 26): Very abundant at La Fayette and Indianapolis.

ROSE

ROSE CURCULIO (Rhynchites bicolor F.)

Minnesota. M. W. Wing (July 15): Very abundant on rose at Saint Anthony Park, and present on rose at Elk River.

Utah. G. F. Knowlton (July 20): Damaging rosebuds severely in a garden at Logan.

ROSE LEAF BEETLE (Nodonota puncticollis Say)

Virginia. W. J. Schoene (July 23): Reported as doing considerable damage to apples in some places early in June.

South Dakota. H. C. Severin (July 26): Considerable damage to roses, especially in the eastern part of State.

A SCARABAEID (Strigoderma arboricola F.)

Minnesota. M. W. Wing (July 15): Present on rose at Saint Paul, and on flowers at New York Mills.

A SCARABAEID (Trichiotinus assimilis Kby.)

Minnesota. M. W. Wing (July 15): Present on rose at Pequot Lakes.



ROSE APHID (Macrosiphum rosae L.)

New Jersey. M. D. Leonard (July 18): Reported as scarce up until about 2 weeks ago, since when a considerable infestation has been building up at Ridgewood.

INSECTS ATTACKING MAN AND

DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicinae)

New Hampshire. F. C. Bishopp and C. N. Smith (June 28): Aedes intrudens Dyar, A. canadensis Theob., and A. cinereus Meig. were collected in the vicinity of Wolfeboro and Melvin, attacking man. A. intrudens by far the most abundant and annoying. Specimens of an Aedes in the stimulans group also collected. (Det. by A. Stone.)

Vermont. H. L. Bailey (June 18): Aedes spp. again unusually abundant in the town of Salisbury; abundant over the State.

Tennessee. G. M. Bentley (July 12): A. aegypti L. is making its appearance in numbers of buildings.

Florida. G. H. Bradley (June 30): Some general breeding on the salt marshes at New Smyrna Beach occurred, owing to rainfall during the last week of June. Infestation in Colusia County very low up to the present. Light-trap collections at New Smyrna have shown average daily collections of the three principal pest species, A. taeniorhynchus Wied., A. sollicitans Walk., and Psorophora columbiae D. & K., of only 0.2 for May and 9.9 for June, as compared with average of 83 and 202 per collection for the same months in 1939.

Mississippi. C. Lyle (July 25): Very numerous, even out in fields, in some sections of the State, owing to the heavy rainfall early in July. Specimens of P. ciliata F. were sent in from Leflore County.

Texas. W. G. Bruce (July 25): Abundant and annoying at Dallas. Very abundant along the Trinity River at Dallas, where flood water's left innumerable breeding places, all of which are heavily populated with larvae and pupae.

Utah. G. F. Knowlton (July 1): Extremely abundant and annoying in one section of Palmira, in Utah County.

Oregon. H. H. Stage (June 30): A. vexans Meig. and A. lateralis Meig. relatively scarce in the lower Columbia River Valley. This was as expected, as most of the egg beds were not inundated by the far-below-normal flood crest of the Columbia and Willamette Rivers.

BLACK FLIES (Simulium spp.)

New Hampshire. F. C. Bishopp and C. N. Smith (June 28): S. venustum Say was found to be abundant all around Lake Winnepesaukee from June 26 to 28. It was attacking livestock in great numbers but man only occasionally. (Det. by A. Stone.)

Maryland. F. C. Bishopp (July 24): S. perissum D. & S. has been actively flying about man, occasionally biting, nearly every day in the Silver Spring area. (Det. by A. Stone.)

Alaska. F. C. Bishopp (July 25): In June four or five specimens of S. vittatum Zett. were submitted from Kodiak, where they are very annoying, although biting only occasionally. (Det. by A. Stone.)

A SAND FLY (Culicoides obsletus Meig.)

New Hampshire. F. C. Bishopp and C. N. Smith (June 28): Fairly numerous and attempting to bite man in the vicinity of Melvin from June 26 to 28. (Det. by A. Stone.)

A GNAT (Chaoborus astictopus D. & K.)

California. A. W. Lindquist (June 30): The first measurable adult emergence at Nice was on April 26. Total numbers emerged in May and June are less than a year ago. Drifts of billions of eggs on the water surface were recorded on 9 days in May and on 13 days in June, whereas only 2 drifts were observed last year.

A PHLEBOTOMUS FLY (Phlebotomus diabolicus Hall)

Texas. A. W. Lindquist (June 14): Specimen received from Austin, where it had attacked man, extends the known distribution of the species. (Det. by D. G. Hall.)

HUMAN FLEA (Pulex irritans L.)

Nebraska. H. D. Tate (July 17): Specimens sent in from Cedar County on June 24. Reported as attacking man.

FLEAS (Ctenocephalides spp.)

Tennessee. G. M. Bentley (July 19): Fleas frequently reported as annoying in buildings and around houses.

Nebraska. H. D. Tate (July 17): Reported as numerous in basement of a house in Gage County on June 20.

BAT BUG (Cimex pilosellus Horv.)

Ohio. E. A. Back (June 10): Report of hordes found in an attic of a house, where bats were roosting. Following the use of control measures, they were found in living rooms but none attacked persons.



ROCKY MOUNTAIN SPOTTED FEVER TICK (Dermacentor andersoni Stiles)

Utah. G. F. Knowlton (July 5): Found attacking man in Allen's Canyon, in Rich County.

CHIGGER (Eutrombicula alfreddugesi Oud.)

Illinois. F. C. Bishopp (July 8): Reported as extremely bad in a garden at Fox River Grove. Indicated as being more abundant here than ever before noted by the correspondent during a 15-year residence in this area.

Missouri. L. Haseman (July 23): Unusually heavy infestation during July, complaints being received from all parts of the State.

Nebraska. H. D. Tate (July 17): Request for control information received from Douglas County on June 25. Troublesome on a lawn.

Texas. W. G. Bruce (July 25): Worse than in the last 4 years at Dallas. Very annoying to man and dogs.

TROPICAL RAT MITE (Liponyssus bacoti Hirst)

District of Columbia. F. C. Bishopp (July 29): Found biting man in a house in Washington. (Det. by H. E. Ewing.)

West Virginia. W. M. Williams (June 11): Collected from man at Romney on June 10. (Det. by H. E. Ewing.)

Alabama. J. M. Robinson (July 16): Reported on man at Oneonta on June 6.

A BIRD MITE (Liponyssus sylviarum C. & F.)

Maryland. E. A. Back (June 13): Specimens received from Baltimore, where they were reported as annoying to the occupants of a house. (Det. by H. E. Ewing.)

CATTLE

SCREWORM (Cochliomyia americana C. & P.)

Texas. E. W. Laake (June 30): No adults taken in the Dallas status trap during the period April-June.

HORN FLY (Haematobia irritans L.)

Georgia. T. L. Bissell (July 20): Flies, apparently this species, reported as seriously annoying to beef cattle at Jonesboro.

Florida. A. L. Brody (July): Still numerous, averaging 1,000 or more per animal, on steers at the Government Station at Panama City. Range animals observed north of Panama City to Bonifay had few or none.

Kansas. H. R. Bryson (July 25): Greatly reduced in numbers during the last 2 weeks.

Texas and Oklahoma. E. W. Laake (June 30): Overwintered so successfully in the vicinity of Dallas and have bred up so well that they are now unusually abundant on cattle at Dallas, Grand Prairie, Cresson, Fort Worth, Rhome, and Bowie, Tex.; also at Waurika, Okla.

E. C. Cushing (July 10): Quite numerous at Menard, Tex., throughout June.

W. G. Bruce (July 25): Found from 500 to 1,000 per head on untreated cattle in the vicinity of Dallas, and from 2,000 to 3,000 per head on range cattle at Cresson, Tex., and at Waurika, Okla. Infestations have not been reduced as usual in the vicinity of Dallas by heat and dryness in July, as there has been ample rainfall to maintain it.

South Dakota. H. C. Severin (July 26): Abundant throughout the State, and especially troublesome in the northeastern part, in the lake and slough districts.

#### STABLEFLY (Stomoxys calcitrans L.)

Florida. S. W. Simmons (July 23): First report this season of annoyance on beaches in Bay County.

Nebraska. H. D. Tate (July 17): Requests for control information sent in from Hamilton, Nuckolls, Butler, Boyd, and Box Butte Counties during the period June 16 to July 15.

Texas and Oklahoma. W. G. Bruce (July 25): Abundant and annoying to cattle and horses at Dallas and Cresson, Tex., and at Waurika, Okla.

South Dakota. H. C. Severin (July 26): Abundant over the State.

#### HORSE FLIES (Tabanidae)

Georgia. T. L. Bissell (July 20): Reported as extremely annoying to beef cattle on pastures at Jonesboro.

Minnesota. M. W. Wing (July 15): Tabanus atratus F. found on horses at Waconia.

Texas. E. C. Cushing (July 10): Horse flies, possibly Tabanus spp., are causing considerable annoyance to stock at Menard.

W. G. Bruce (July 25): Apparently more abundant at Dallas than in the last 4 years.

Utah. G. F. Knowlton (July 6): T. sonomensis O.S. is annoying livestock at Woodruff.



SHORT-NOSED CATTLE LOUSE (Haematopinus eury sternus Nitz.)

General. O. G. Babcock (July 25): From 1 to  $1\frac{1}{2}$  percent of the untreated range-breeding herd was infested on June 30 in the Texas Panhandle, in northeastern New Mexico, and in southern Colorado.

TICKS (Amblyomma spp.)

Florida. A. L. Brody, et al. (July 19): Gulf coast ticks (A. maculatum Koch) were numerous on sheep from open range at a place near Bethlehem, about 20 miles northwest of Bonifay. Average per animal was about 10. In some places few ticks, but considerable injury was observed.

Mississippi. C. Lyle (July 25): Specimens of the lone star tick (A. americanum L.) received from Marion County the last week in June.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

TERMITES (Isoptera)

Rhode Island. A. E. Stene (July 26): Becoming abundant in timber blown to the ground by the hurricane of 1938.

Iowa. C. J. Drake (June 28): Reported as doing considerable damage to buildings in Fort Dodge, Des Moines, Ottumwa, Clinton, Keokuk, and Rock Rapids.

Nebraska. H. D. Tate (July 17): Complaints and inquiries regarding damage to buildings by Reticulitermes tibialis Banks received from Furnas, Gage, Nemaha, and Richardson Counties during the period June 16 to July 15.

ANTS (Formicidae)

General. C. F. W. Muesebeck (July): Numerous specimens of Tetramorium caespitum L. being submitted under the impression that they are termites. Most of the specimens are from towns and cities in States along the Atlantic seaboard, especially from Virginia northward. (Det. by M. R. Smith.)

Virginia. E. A. Back (July 25): Formica truncicola integra Nyl. collected on May 30 at Richmond. (Det. by M. R. Smith.)

Georgia. E. A. Back (July 25): Specimens of Camponotus abdominalis floridanus Buckl. received on June 8 from Savannah. (Det. by M. R. Smith.)

Mississippi. C. Lyle (July 25): Iridomyrmex analis Andre reported as damaging strawberry plants in Bolivar County. The Argentine ant (I. humilis Mayr) was reported as causing annoyance in some houses in Jackson County.

Kentucky. W. A. Price (July 25): More than the usual number of inquiries on ants received.

Indiana. J. J. Davis (July 26): The carpenter ant (C. herculeanus pennsylvanicus Deg.) has been very abundant in many parts of Indiana, where infestations occurred in and around houses.

Arkansas. E. A. Back (July 25): Specimens of Crematogaster laeviuscula clara Mayr received on June 20 from Texarkana. (Det. by M. R. Smith.)

Illinois. E. A. Back (July 25): F. cinerea neocinerea, found in a house in Chicago, received on July 6. Specimens of Lasius umbratus mixtus aphidicola Walsh received on July 5 from Effingham. (Det. by M. R. Smith.)

Minnesota. M. W. Wing (July 15): A variety of F. fusca L. was very abundant at Hector. C. herculeanus pennsylvanicus was scarce at Milaca, when a nuptial flight was observed. Also scarce at Deerwood.

Nebraska. H. D. Tate (July 17): C. herculeanus pennsylvanicus reported as appearing in well water, and as living in the walls of the well, in Pawnee County on June 25. The little black ant (Monomorium minimum Buckl.) and Pharaoh's ant (M. pharaonis L.) were troublesome in a house in Hamilton County on July 2.

Texas. R. K. Fletcher (July 22): Reported on young plum trees in San Saba County on June 3; in a house in Harris County on June 20; in Childress County on July 12 (probably the red agricultural ant, Pogonomyrmex barbatus F. Smith); and in houses in Rockwall and Collin Counties on July 7.

Arizona. E. A. Back (July 25): Specimens of Liometopum apiculatum luctuosum Whlbr. received on June 22 from Miami. (Det. by M. R. Smith.)

#### ORIENTAL COCKROACH (Blatta orientalis L.)

Maryland. E. A. Back (June 24): Specimens received from Bay City.

Virginia. E. A. Back (July 3): Specimens received from University.

Minnesota. M. W. Wing (July 15): Scarce in houses at Saint Paul.

Nebraska. H. D. Tate (July 17): Reported on June 17 as infesting basements of two houses in Douglas and Lancaster Counties.

#### GERMAN COCKROACH (Blattella germanica L.)

Ohio. E. A. Back (June 23): Specimens received from Niles.

Mississippi. C. Kyle, et al. (July 25): Complaints of annoyance reported from Grenada and Lincoln Counties, from southeastern Mississippi, and by residents of State College.



BROWN-BANDED COCKROACH (Supella supellectilium Serv.)

California. H. J. Ryan (April 8): Taken in a house in San Bernardino.  
(Det. by A. G. Rehn.)

POWDER-POST BEETLES (Lyctus spp.)

Ohio. T. H. Parks (July 24): More than the usual number of complaints received of the severe injury caused generally.

Indiana. J. J. Davis (July 26): Still a major pest in buildings.

Iowa. C. J. Drake (June 28): Found damaging buildings in Russell and Des Moines.

Kansas. R. T. Cotton (June 25): L. parallelipedus Melsh., was collected in a box car of flour at Manhattan. (Det. by W. S. Fisher.)

WHARF BORER (Nacerda melanura L.)

Massachusetts. A. I. Bourne (July 27): Reported as overrunning lower apartments in a building in Brookline on July 1.

New York. E. A. Back (July 25): Adults received during June from Brooklyn; reported as swarming over inner walls and floors of grain barges. Apparently emerging from timbers kept constantly dampened by water.

New Jersey. E. A. Back (June 20): Adults received from food establishment in Newark.

Maryland. E. A. Back (June 20): Adults received from house in Hyattsville, where they were continually appearing in a screened porch. Adults thought by owner to be emerging from furniture in a furniture store in Baltimore were traced to basement, where damp floor boards were honeycombed by larvae.

Ohio. E. A. Back (July 25): Adults exceedingly abundant in basement of building in Cleveland during the period June 1 to July 20. Finding their way in small but annoying numbers to the floor above.

WOOD BORERS (Coleoptera)

Massachusetts. A. I. Bourne (July 27): Callidium violaceum L. emerged early in June in large numbers from pine lumber, much of it with bark edging, piled since 1936 in the open at Northampton. Box lumber was injured by larvae. Adults of Monochamus scutellatus Say emerged from the walls or woodwork of a recently constructed house in Chelmsford between early May and early July. House first occupied on April 1.

New York. E. A. Back (July 10): Adults of Throscus chevrolati Bonva found in numbers on walls and ceilings in house. Apparently attracted into house by lights from outdoors, where they are believed to be breeding in decayed wood. (Det. by W. S. Fisher.)

T. G. Spencer (July 22): Logs in log cabin built 13 years ago near Rochester found to be scored and mined by insects (Merium proteus Kby.), which have worked under the bark. (Det. by W. H. Anderson.)

New Jersey. E. A. Back (June 1): Specimens of a borer, C. janthinum Lec., received from Budd Lake, where they were reported as abundant in a large log cabin built of cedar. (Det. by W. S. Fisher.)

Maryland. F. V. Rand (July 24): Specimens of Smodicum cucujiforme Say removed from rustic furniture, 3 years old, at Epping Forest, near Annapolis. (Det. by W. S. Fisher.)

E. A. Back (June 11): Beetles, Hexarthrum ulkei Horn and Pselactus spadix Hbst., removed from old, damp, decaying basement floor boards in a building in Baltimore, where they were associated with Nacerda melamira L. (Det. by L. L. Buchanan.)

District of Columbia. E. A. Back (June 27): Adult of the old house borer, Hylotrupes bajulus L., captured emerging from newly made exit hole in wooden windowsill of house constructed during fall of 1937. Exit holes found in June of 1938 and 1939.

Florida. J. F. Hanson (July 18): Reported as presumably living in wood in a house in Florida. (Det. by W. S. Fisher.)

Ohio. N. F. Howard (June 26): A chestnut borer (Agrilus sp.) collected in a residence in Columbus, built in 1936. Many beams, cornices, and other wooden parts found to contain holes. Associated with it was Xyleborus affinis Eich. (Det. by M. W. Blackman.)

Michigan. G. N. Lamb (June 26): Ptilinus pruinosis Csy. found attacking quaking aspen logs in a cabin near Big Rapids. (Det. by W. S. Fisher.)

Minnesota. M. W. Wing (July 15): Phymatodes dimidiatus Kby. present on white pine logs at Saint Paul.

Nebraska. H. D. Tate (July 17): A specimen sent in from Thayer County on July 1 was identified as Buprestis rufipes Oliv. This is apparently our first record for this species in Nebraska.

Texas. E. A. Back (June 28): Specimens of the pale-marked ash borer (Eburia quadrigeminata Say) received from Corpus Christi, where they were reported as attacking oak furniture in a residence.

California. E. A. Back (June 12): Trunk attacked and rendered unsalable by Polycaon stouti Lec.

Mexico. E. A. Back (July 22): A rustic Mexican chair, made in Guadalajara, was found infested by a scolytid borer, Renocis mexicanus Blackman, in New York City, N.Y., in June 1939, and was shipped to Washington.



An active infestation maintained itself until July 22, 1940, in those parts of the chair made of wood of Eysenhardtia, from which the bark had not been removed. (Det. by M. W. Blackman.)

A WASP (Trypoxylon rubrocinctum Pack.)

Maryland. F. V. Rand (July 24): Removed from rustic furniture at Epping Forest, near Annapolis. (Det. by C. F. W. Muesebeck.)

TISSUE PAPER BUG (Thyloclypeus contractus Mots.)

District of Columbia. E. A. Back (July 6): Three larvae found in a house in Washington.

A BOOK BORER (Neogastrallus librinocens Fisher)

Florida. E. A. Back (July 29): Infestation of books in a library at Winter Park seemed upon inspection to be of recent origin. Control measures used during June. Libraries at Saint Leo and Saint Augustine, treated during the summer of 1938, show no evidence of active infestations. Record books in the courthouse of St. Johns County badly infested.

CARPET BEETLES (Dermestidae)

General. E. A. Back (July 25): Specimens of the black carpet beetle (Attagenus piceus Oliv.) received on June 17 from Detroit, Mich.; on June 27 from Newark, N. J., and from Cleveland, Ohio; on June 25 from Ellwood City, Pa.; on July 2 from New York City; and on July 8 from Whitesboro, N. Y., and from Orange, N. J. Specimens of the varied carpet beetle (Anthrenus verbasci L.) received from a house in Dallas, Pa., on July 8. Specimens of A. verbasci received from Hagerstown, Md., on June 25.

DRUG STORE WEEVIL (Stegobium paniceum L.)

Idaho. T. A. Brindley (May 6): Peas injured at Moscow. (Det. by W. S. Fisher.)

DERMESTIDS (Trogoderma spp.)

Michigan. R. Hutson (July 24): T. versicolor Creutzer was found in cereal at Fremont.

Minnesota. M. W. Wing (July 15): T. ornatum Say found on rolled wheat.

LARDER BEETLES (Dermestes spp.)

District of Columbia. E. A. Back (July 15): Larvae of D. vulpinus F. found in a heavy infestation in a building.

Minnesota. M. W. Wing (July 15): D. lardarius L. present at Milaca.

A FLOUR BEETLE (Tribolium madens Charp.)

Minnesota. M. W. Wing (July 15): Present on rolled wheat.

LESSER GRAIN BORER (Rhizopertha dominica F.)

Kentucky. E. A. Back (July 19): Specimens received from Louisville, where they were found riddling the heavy leather covering of horse collars filled with rye straw.

WEBBING CLOTHES MOTH (Tineola biselliella Hum.)

General. E. A. Back (July 18): Larvae were ruining celanese covers of wool-filled comforters in New York City. In June three new houses in Scarsdale, N. Y., were infested with larvae developing on cattle-hair insulation around plumbing in walls. A parasite (Apanteles carpatus Say) of the clothes moth was collected in considerable numbers on windowsills of a storage warehouse in Washington, D. C. (Det. by C. F. W. Muesebeck.) So troublesome in a house in Milwaukee, Wis., that the cattle-hair insulation was removed.

FIELD CRICKET (Gryllus assimilis F.)

North Dakota. J. A. Munro (July 21): Moderately abundant near Rugby on July 20.

Nebraska. H. D. Tate (July 17): Reported as damaging strawberries in Washington County on June 20.

HOUSE CRICKET (Gryllus domesticus L.)

Virginia. E. A. Back (June 19): Present in houses in Richmond near a city dump. (July 22): Reported as abundant in a house near city dump at Lyon Village.

SPRINGTAILS (Sira spp.)

District of Columbia. E. A. Back (June 12): S. platani Nicolet and S. buski Lubbock were present and annoying in an apartment in Washington. (Det. by Grace Glance.)

BOOKLOUSE (Troctes divinatorius Mull.)

District of Columbia. E. A. Back (June 12): Found in an apartment in Washington. (Det. by A. B. Gurney.)





THE UNIVERSITY OF FLORIDA  
LIBRARY

1. The first part of the book is devoted to a general survey of the history of the United States from the discovery of the continent to the present time.

2. The second part of the book is devoted to a detailed account of the political and social conditions of the United States at the present time.

3. The third part of the book is devoted to a detailed account of the economic conditions of the United States at the present time.

(The following is a list of the contents of the book.)

1. The first part of the book is devoted to a general survey of the history of the United States from the discovery of the continent to the present time. This part of the book is divided into three sections: the first section deals with the discovery of the continent and the early years of the settlement; the second section deals with the period of the American Revolution and the early years of the Republic; the third section deals with the period of the American Civil War and the Reconstruction era.

2. The second part of the book is devoted to a detailed account of the political and social conditions of the United States at the present time.

3. The third part of the book is devoted to a detailed account of the economic conditions of the United States at the present time.

4. The fourth part of the book is devoted to a detailed account of the foreign relations of the United States at the present time.

5. The fifth part of the book is devoted to a detailed account of the future of the United States.

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